

This electronic thesis or dissertation has been downloaded from the King's Research Portal at <https://kclpure.kcl.ac.uk/portal/>



## **Necessity, logic and God.**

Recber, Mehmet Sait

The copyright of this thesis rests with the author and no quotation from it or information derived from it may be published without proper acknowledgement.

### **END USER LICENCE AGREEMENT**



This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International licence. <https://creativecommons.org/licenses/by-nc-nd/4.0/>

You are free to:

- Share: to copy, distribute and transmit the work

Under the following conditions:

- Attribution: You must attribute the work in the manner specified by the author (but not in any way that suggests that they endorse you or your use of the work).
- Non Commercial: You may not use this work for commercial purposes.
- No Derivative Works - You may not alter, transform, or build upon this work.

Any of these conditions can be waived if you receive permission from the author. Your fair dealings and other rights are in no way affected by the above.

### **Take down policy**

If you believe that this document breaches copyright please contact [librarypure@kcl.ac.uk](mailto:librarypure@kcl.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.

# NECESSITY, LOGIC AND GOD

Mehmet Sait Reçber

King's College, University of London

Submitted for the degree of Doctor of Philosophy

1998

## ABSTRACT

*Necessity, Logic and God* is an investigation into the ground and nature of necessary truths and their relation to God. The basic aim of the thesis is to establish the case for "Divine Conceptualism" which explains necessary truths in reference to a realist ontology of abstract objects as grounded in the nature and mind of God.

In so doing, the thesis first critically examines the major theories of necessary truths such as naturalism, linguistic conventionalism, the Wittgensteinian conventionalism and various conceptualist theories in relation to the human-mind-dependency. The basic questions raised in chapters 1 to 4 are: Can necessary truths be naturalised? Are necessary truths analytic? Do necessary truths owe their necessity to the contingent rules of linguistic conventions? Are necessary truths the rules of our language-game? Can necessary truths depend upon the human mind?

Having eliminated the theories hitherto examined in favour of realism, at the end of chapter 4, Divine Conceptualism is proposed to solve the problems of realism. Before developing Divine Conceptualism, however, the thesis studies two other accounts which also relate necessary truths to God. Thus, Chapter 5 and Chapter 6 examine the contention that God is responsible for the existence of necessary truths in terms of creation, the Cartesian Voluntarism and Theistic Activism are then examined in this connection. The principle questions asked are: Can the notion of creation be applied to the framework of necessary truths and objects? Can God change the truth value of a necessary proposition? Or could God have refrained from creating necessary truths?

With the creationist accounts examined and rejected, chapter 7 develops and defends Divine Conceptualism and tries to show how it avoids the problems facing the creationist views. Thus, in a tentative manner, Divine Conceptualism is argued to offer a powerful explanation for the phenomenon of necessary truths because of its simplicity and various other advantages.

## Contents

Abstract.....	2
Acknowledgements.....	5
Introduction: Necessity Matters.....	6
Chapter 1. Naturalism, Realism and Necessity.....	20
1.1 Empiricism and Necessary Truths.....	21
1.2 Can We Dispense with Necessity?.....	31
1.3 Intensionalism versus Extensionalism.....	39
Chapter 2. Conventionalism, Analyticity and Necessity.....	50
2.1 The Conventionalist Argument.....	51
2.2 Analyticity Examined.....	56
2.3 Are Meanings Conventional?.....	60
2.4 Linguistic Rules and Logical Truths.....	69
Chapter 3. Wittgenstein, Rules and Necessity.....	77
3.1 Radical Conventionalism.....	78
3.2 Anthropological Conventionalism.....	93
Chapter 4. Conceptualism, Realism and God.....	102
4.1 Quasi-Realism.....	105
4.2 The Cautious Man.....	111
4.3 Realism, Anti-Realism and Truth.....	115
4.4 Realism, Conceptualism and God.....	121
Chapter 5. Creationism: The Cartesian Voluntarism.....	145
5.1 The Cartesian Argument: an Overview.....	148
5.2 Universal and Limited Possibilism.....	152
5.3 Necessary Truths and Divine Nature.....	161
5.4 Necessary Truths, Conceivability and Human Mind.....	171
Chapter 6. Creationism: Theistic Activism.....	178
6.1 Theistic Activism.....	179
6.2 Creation, Time and Beginning.....	182
6.3 Creation and Divine Freedom.....	189
6.4 Creation and Divine Nature.....	194



Chapter 7. Divine Conceptualism Revisited.....204

7.1 Divine Conceptualism Characterised.....207

7.2 Divine Conceptualism, God and His Nature.....216

7.3 Conclusion.....224

Bibliography.....232

## Acknowledgements

Many people have helped me to develop this thesis and I am grateful to all of them. Among those with whom I have discussed I should like to thank especially Professor Alvin Plantinga, Dr. Mark Wynn, Dr. Martin Stone and Dr. A. Hadi Adanali. My main debt of gratitude is however to my supervisor Professor Paul Helm for his criticisms, comments and suggestions. I am also grateful to Ankara University for the grant to carry out this research. And finally, special thanks are due to Professor Necati Öner and Professor Mehmet Bayrakdar for their helpful suggestions and continuous support throughout my studies.

INTRODUCTION  
NECESSITY MATTERS

## INTRODUCTION: NECESSITY MATTERS

Michael Dummett pointed out that the philosophical problem of necessity is twofold: what is the source of necessity and how do we recognise it? How can there be certain things which are not just true, but necessarily true, namely, which are not true only in the actual world, but true in every possible world? Or, how can certain things be such that even God, if true cannot make them false, and if false, cannot make them true?<sup>1</sup>

Necessity, thus understood, is a property of certain propositions which are such that if 'true', could not thinkably have been false, that is, they could not have failed to be true, hence, are *necessarily* true. To make a distinction between propositions with respect to their modal properties, therefore, does seem to be somehow inevitable, because there are some propositions whose truth is a matter of contingent happenings such as

(1) Plato is the tutor of Aristotle.

But also there are some propositions whose truth is of necessity, hence are doomed to be true like the proposition that

(2)  $2 + 2 = 4$ .

Clearly, (1) could have been false; instead, it could have been true that Plato did not teach Aristotle. However, by contrast with (1), it is hard to think how (2) could possibly have been false; namely, there seems to be no possible state of affairs in which one might conceive either the truth of " $2 + 2 = 3$ ", or of " $2 + 2 = 5$ ". Accordingly, although it is hard to conceive any circumstances in which " $2 + 2 = 4$ " is other than it is, one can easily think of a counterfactual situation where Plato is not the tutor of Aristotle.

---

<sup>1</sup> Dummett (1959b), p. 169.



It is exactly at this point that the celebrated distinction between contingent and necessary truth<sup>2</sup> presents itself. The difference between the two types of propositions in question can be clarified in various ways.<sup>3</sup> For instance, it has been argued that a necessary truth is one whose negation is impossible, and thus implies a contradiction, whereas the denial of a contingent truth is possible, and does not imply a contradiction.

Again, given a modal realist account of *de re* modalities, according to which propositions are some kind of abstract objects together with essential and contingent properties, one might say that contingent truths have their truth value, thus, the property of being "true", *accidentally* while necessary truths have this property *essentially*.<sup>4</sup> If a proposition, accordingly, has the property of being true or false accidentally, there seems to be no reason why it could not have been otherwise; i.e., there is no fact in virtue of which it *must*

---

<sup>2</sup> The distinction between necessary and contingent truth holds a perennial interest in the philosophical tradition, therefore it has long been noted by philosophers in varieties of ways. Thus, for example, Leibniz characterised necessary truths as "truths of reason" and contingent truths as "truths of facts". Our reasoning, on this account, is underpinned by two basic principles:

*the principle of contradiction* by virtue of which we judge to be false that which involves a contradiction, and true that which is opposed or contradictory to the false; ... and *the principle of sufficient reason* by virtue of which we consider that no fact can be real or existing and no proposition can be true unless there is a sufficient reason, why it should be thus and not otherwise. (1973a, §§ 31-32).

The same distinction is referred to by Hume in his division between "the relations of ideas" and "matters of fact"; according to which, the former set of truths, as necessary, are either intuitively or demonstratively certain, and hence can be recognised by the mere operation of thought, independently of an existential ground in the world. So for instance, "the square of the hypotenuse is equal to the square of two sides" is a relation of thought concerning triangles, while "three times five is equal to half of thirty" expresses a relation between these numbers. (1975, p. 25).

<sup>3</sup> For the traditional characterisations of necessary propositions, see Pollock (1967), p. 308.

<sup>4</sup> Plantinga (1987), pp. 189-191.

have been as it has been; hence, it could have been true or false and its being so is not a matter of necessity. Yet, on the contrary, if a proposition has the property of being true essentially, it could not possibly have been false. Such a proposition would have been "true no matter what". On the other hand, if a proposition has the property of being false essentially it would be an *impossible* proposition, and such a proposition could not possibly have been true<sup>5</sup>. In terms of possible world semantics, therefore,

(i) A proposition *p* is *necessarily true* if and only if *p* is true in every possible world,

(ii) A proposition *p* is *contingently true* if and only if *p* is true in at least one possible world,

(iii) A proposition *p* is *impossible* (necessarily false) if and only if *p* is false in every possible world.

Among necessary truths significantly are also such propositions as:

(3) If all men are mortal and Socrates is a man, therefore Socrates is mortal,

whose necessity, one might say, proceeds from being a proper instance of the syllogistic form of

(4) All *S* are *P*, *M* is *S*, therefore *M* is *P*.

To be sure, all truths of logic including valid argument forms such as (4), *modus ponens* etc., and their proper instances constitute a subset of necessary truths. By the same token, some necessary propositions, it might be said, owe their properties of being necessarily true to *the laws of thought*<sup>6</sup>, so for example,

(5) Socrates is Socrates

---

<sup>5</sup> See Hughes and Cresswell (1968), p. 22.

<sup>6</sup> *The law of identity* and *the law of contradiction* together with *the law of excluded middle*, that is, that *x* is either *F* or not-*F*, are usually known as "the laws of the thought" which are generally taken to be essential to any possible ratiocination.



is necessarily true in terms of the *law of identity*, i.e.,  $x = x$ , while,

(6) This table cannot be rectangular at  $t1$  and non-rectangular at  $t1$ ,  
and

(7) A proposition  $p$  cannot be both true and false (at the same time)  
is necessarily true in terms of the *law of contradiction*, that is,

(8)  $x$  cannot be  $F$  and not- $F$  (at the same time).

Although by "necessity" or "necessarily true" one usually has in mind "what is logically necessary", nevertheless, one might legitimately make a distinction<sup>7</sup> between truths that are logically necessary in the narrow sense - such as the truths of first order logic, and truths that are logically necessary in the broad sense - which may include truths of set theory, arithmetic and mathematics and also truths such as

(9) No one is taller than himself

(10) If a thing is red then it is coloured.

The necessity of some propositions, however, is a matter for debate; consider for instance:

(11) There never was a time when there was space but no material  
objects

and

(12) There exists a being than which it is not possible that there be a  
greater<sup>8</sup>.

The notion of necessity is also needed for a proper understanding of entailment or necessary implication statements<sup>9</sup> which have a central place in logic. Or indeed, given the fundamental role of the notion of *logical consequence* in logic, one might agree with the view that logic itself "is the

---

<sup>7</sup> See Plantinga (1974), pp. 1-2.

<sup>8</sup> *Ibid*, p. 2.

<sup>9</sup> See Konyndyk (1986), p. 11.

systematic presentation of certain relations of deducibility or implication which hold among propositions".<sup>10</sup> Thus, for example, that

(13)  $x$  is a mother

*entails*

(14)  $x$  is female.

That is to say, one can *deduce* the truth of (14) from the truth of (13). However, it seems that one can hardly make satisfactory sense of the notion of entailment or necessary implication, which is essential to one's understanding of the very notion of logical consequence or valid deduction, without the intuition of necessity. Thus without the notion of necessity preserved in the first place, one might wonder what it would be like to employ the expressions such as "...is a logical *consequence* of...", "it logically *follows* that..." and " $P$  logically *implies*  $Q$ " etc. In claiming that one proposition entails another, or indeed that the proposition  $p$  entails  $q$  or  $q$  (logically) follows from  $p$ , therefore, one does not seem to be committed just to the belief that two propositions  $p$  and  $q$  are somehow interconnected, but also to the fact that one cannot be true while the other is false. There seems to be a *necessary relation* obtaining between (13) and (14); that is, it is impossible for  $x$  to be a mother but fail to be female. If so, to put it another way<sup>11</sup>, to say that  $p$  entails  $q$  is to say that the contradictory of  $p$  and not- $q$ , that is, *not-( $p$  and not- $q$ )*, is logically necessary. Then, it must be evident that the truth  $p$ , the antecedent of a conditional such as  $p \supset q$ , is sufficient to secure the truth of the consequent  $q$ , that is, it is *impossible* for  $p$  to be true and  $q$  to be false.<sup>12</sup>

---

<sup>10</sup> Strawson (1967a), p. 1.

<sup>11</sup> See Strawson (1952), p. 23.

<sup>12</sup> Indeed, that is what C. I. Lewis calls "strict implication", which has been one of the basic motivations behind the development of modal logic for overcoming the paradoxes of "material implication". But this has been rather controversial. For a debate on this issue, see Duncan-Jones (1935); Kneale (1945-46); Hughes and Cresswell (1968), pp. 335-339.



Nevertheless, to say that logic is the systematic presentation of deducibility should not mean that logical laws (such as the laws of thought and the rules of inference) are themselves just rules, and therefore cannot be said to be true or false. For a logical rule such as *modus ponens*,

(15) If  $p$ , and if  $p$  implies  $q$ , then  $q$ ,  
itself is a necessary truth.<sup>13</sup>

Consequently, in order to understand the notion of logical consequence or entailment one needs to presuppose the notion of necessity, if by  $p \supset q$  we mean that it is necessarily the case that not- $(p$  and not- $q)$ . But then, the notion of entailment would be explained on the grounds of the notion of necessity.

Similar considerations apply to the rest of logical truths; thus, for example in claiming that a contradiction is false, we mean that it is impossible that  $(p \ \& \ \text{not-}p)$  be true, that is to say,  $p$  cannot be true together with not- $p$ ; hence it is necessarily false.

If a proposition  $p$  is true in terms of logic alone, we usually take this to say  $p$  cannot possibly be false, and no matter of fact can refute  $p$ , then  $p$  is necessarily true. Thus for instance, let us consider logical truths such as (3) which instantiates a valid logical form. From the premises *All men are mortal* and *Socrates is a man*, we draw the conclusion that *Socrates is mortal*. But in saying this we are not prepared to concede that the premises can be true and the consequence can be false. On the contrary, as it seems, what (3) reveals is that it is *impossible* for the premises to be true and the conclusion to be false. Indeed this is presumably what makes a logical form valid in the sense that a valid logical form is not simply truth-preserving but *necessarily* truth-

---

<sup>13</sup> Here, one should note that whether logic is a body of truths or a body of rules of inference is a matter of current debate on the nature of logic. (See Harman, 1984, pp. 107-112). Thus, those who think that logic is a body of truths explain logical laws in axiomatic terms whereas the advocates of the view that logic is just the science of inferences account for logical laws in proof-theoretic (syntactic) terms. And this conflict, in turn, seems to have brought to the fore the realist and anti-realist views of logic.

preserving<sup>14</sup>; it *must* yield only a true conclusion out of true premises for all its substitutions. That is to say, it is *necessarily* the case that if the premises are agreed upon to be true, then the consequence, which *logically follows* from them, *must* be true.

Now, it should be clear that the notion of necessity is therefore a *common property* underlying all logical relations; and thus essential to any exposition of those relations as well as making sense of what it is to be true in terms of logic. But on the other hand, one can also see that logical necessities have a *compulsory character* in that once certain things are agreed upon beforehand to be true, there seems to be no way to avoid *what logically follows* from them; and this is what makes the notion of logical consequence objective. For, it is somehow impossible, or unintelligible for us, for example, to agree upon the truth of the premises of an argument such as *All men are mortal* and *Socrates is a man*, but disagree with the conclusion that logically follows from the premises, that is, *Socrates is mortal*.<sup>15</sup> Logical rules, therefore, are

---

<sup>14</sup> See Konyndyk (1986), pp. 11-12.

<sup>15</sup> There is however a well-known objection to be cited here. The objection is raised by the sceptical character, the Tortoise (in Lewis Carroll's "What the Tortoise said to Achilles"), who even though he agrees with Achilles on the premises that (A) Things are equal to the same are equal to each other, (B) The two sides of this Triangle are things equal to the same, still refuses to accept what logically follows from them, that is, (Z) The two sides of this Triangle are equal to each other, as he thinks that an additional premise, that is, (C) *if A and B then Z* is required for the proposed conclusion to be drawn. Again, the Tortoise accepts (C) but does not accept Z as he insists that still another premise is needed, that is, (D) *if (if A and B then Z)*. Thus, the Tortoise argues that since the desired conclusion involves an infinite number of premises such C, D, E, F, and so on, one can agree on what logic says (that is, C, D, E, F...) but still refuse to draw the conclusion, Z. (Carroll, 1972, pp. 118-119). However, we might rightly wonder what 'agreeing' or 'accepting' (C) means to the Tortoise. Does he really agree with Achilles on (C)? The Tortoise's agreement on the premises might astonish as would the case of a friend who makes a promise but does not fulfil her promise. Of course, one might say, she still makes a promise, that is, it is one thing to make a promise, yet another thing to keep such a promise. In fact, this might be true; but does *giving a promise* also mean that *one is free to break that promise*? I do not



essential to certain human intellectual activities such as thinking, inferring, calculating; they set limits to human understanding, conceivabilities and hence determine the boundaries of what is intelligible and unintelligible for us. It is hard to imagine how can one think or make sensible remarks without presupposing the rules of logic. This fact has been clearly underlined by Kant:

Logic is a science of the necessary laws of thought, without which no employment of the understanding and the reason takes place, which consequently are the conditions under which alone the understanding can and should be consistent with itself-the necessary laws and the conditions of its right use-Logic is therefore a *Canon*.<sup>16</sup>

Similarly Frege argued that "laws of thought" (or "laws of truth") are *objective* as well as *prescriptive*; they do not describe *how* we actually think, rather, they show how we *must* think:

---

think so. That one is free not to fulfil her promise does not mean that she is justified in doing so, therefore, there are good reasons to suppose that our friend does not *really* promise if, in so doing, she also means that she can break her promise. Correspondingly, one wants to say, the Tortoise does not *really* accept (C) and therefore does not agree with Achilles on (C).

However, it might be argued that such an analogy is irrelevant, because the Tortoise does not break his promise; he keeps his promise at any stage in that he never denies that he agreed that (C). This seems to be correct, but then again *what does it mean to agree that (C)?* It has been argued that there can be lessons to be learned from the Tortoisian objection such that logic is not a body of truths but also involves a set of rules of inference. Hence, on this account, what the Tortoise does not really accept is that (C) is a rule. (See Harman, 1984, p. 111). However, it seems to me that such a view is mistaken, because the Tortoise clearly accepts (C) but does not fulfil what it says. Therefore, I would agree with the view that whether the Tortoise accepts or does not accept what follows from (A) and (B), that is, (Z) is logically necessary, therefore the Tortoise is already under a logical necessity as the first formulation of the argument is valid. Therefore the procedure followed by Achilles is wrong in that he seems to have agreed with the Tortoise as if the first formulation of the argument were not semantically valid. See Thomson (1963) pp. 95-105.

<sup>16</sup> (1972), p. 38.

...the laws of logic ought to be guiding principles for thought in attainment of truth... [and] the laws of logic [can] be called 'laws of thought': so far as they stipulate the way in which one ought to think. ...[therefore] "laws of thought" prescribe universally the way in which one ought to think if one is to think at all.<sup>17</sup>

Once it is stated that logic is the unique criterion for any possible way of thinking, it is inevitable to ask what is the relation of thinking to the laws of logic? Given that thinking is a mental activity it is hard to see there being 'laws of thought' without there being at least one thinking subject, namely, a mind. Then the question is: are the laws of logic somehow embedded in our minds or are they mind-independent? In any case, how do we know them?

Here is the epistemological problem of necessity. The distinction between necessary and contingent truths, to be sure, is a metaphysical one, but it has closely related epistemological and semantical counterparts; *a priori* - *a posteriori* and *analytic* - *synthetic* respectively. Since I shall consider the question of analyticity and necessity and thus whether there is an extensional coincidence between necessary and analytic truths later (see 2.2, 19n), here I shall clarify only the relation between *necessity* and *apriority*.

There has been a traditional assumption that necessary truths are *a priori* in nature. According to this view, what is necessary can be known *a priori* and what can be known *a priori* is necessary; thus for example, Kant argues, in the *Critique of Pure Reason*, that "any knowledge that professes to hold *a priori* lays claim to be regarded as absolutely necessary".<sup>18</sup>

The reason behind the traditional identification of the metaphysical and epistemic modalities is evident: if something is - in a broad sense - logically necessary, it does not depend, for its truth or validity, on the empirically

---

<sup>17</sup> (1964), p. 12.

<sup>18</sup> Kant (1929), p. 11.



observable, discoverable features of any possible world; rather it is a state of affairs which obtains in every possible world. Hence, it is knowable independently of any experience of particular aspects of contingent states of affairs. On the other hand, contingency is identified with the *a posteriori* since one needs a particular empirical investigation in order to establish the truth value of a proposition descriptive of a contingent state of affairs which might or might not obtain.<sup>19</sup>

Nevertheless, that what is necessary can be known *a priori* and what can be known *a priori* is necessary has recently been called into question especially by Kripke who has maintained that there can be contingent *a priori* truths and also necessary *a posteriori* truths. With regard to contingent *a priori* truths he suggests<sup>20</sup> we consider the case of someone who fixes the reference of the term "one meter" as "the length of stick *S* at *t<sub>0</sub>*". For Kripke, "one meter" is a *rigid designator*, that is, it designates the same unit of length -the length of *S* at *t<sub>0</sub>* in every possible world, whereas "the length of stick *S* at *t<sub>0</sub>*" is not since, in some counterfactual situations the length of the stick *S* could have been other than it has been at *t<sub>0</sub>*, that is, it could have been longer or shorter under different physical circumstances. If so, what about the epistemological situation of the person who determines "a meter" by reference to "the length of stick *S* at *t<sub>0</sub>*"? Kripke argues that this case provides us with the possibility of contingent *a priori* truths on the basis of the fact that the person who determines the term "one meter" as "the length of stick *S* at *t<sub>0</sub>*"

---

<sup>19</sup> See Salmon (1982), p. 76. Another motivation behind such an equation might be that, on the traditional metaphysical view, the truths of reason (logico-mathematical truths) stand for the relations obtained among certain abstract and eternal objects or essences such as properties, propositions, state of affairs, etc., whose existence is necessary and which would exist (timelessly) even though there were no physical objects. (See Chisholm, 1977, p. 34).

<sup>20</sup> Kripke (1980), pp. 54-56.

knows the length of the stick *S* at to is one meter without any empirical investigation.<sup>21</sup>

What about necessary *a posteriori* truths? Even if we may not know them *a priori*, Kripke says, we might discover certain necessary truths via empirical investigation. Thus, for example, identity statements between names such as

(14) Cicero is Tully,

and

(15) Hesperus is Phosphorus

are necessarily true, even though not *a priori* knowable.

In the case of (14), we might have two names -i.e., 'Cicero' and 'Tully'- for the same person, and clearly as a proposition expressing identity between names, it is a necessary truth. But given that one can use the name 'Cicero' and also 'Tully' to refer to the same person without knowing that Cicero is Tully, that is, it can be matter empirical discovery that he comes to know that 'Cicero' and 'Tully' are identical, then it follows that he does not know *a priori* that Cicero is Tully. Similarly, in (15), one can refer to the same planet, i.e., Venus, by using the terms 'Hesperus' and 'Phosphorus' without beforehand knowing that they denote the same planet, and again it would be a matter of empirical discovery to decide that Hesperus and Phosphorus are identical<sup>22</sup>. Then, it follows that there are necessary truths which are knowable *a posteriori*.

In fact, there seem to be some further reasons for thinking that this conviction -that not all necessary truths are *a priori*- must be true; thus, for example, there are necessary truths which, let alone knowable *a priori*, are

---

<sup>21</sup> P. Kitcher also argued for the existence of contingent *a priori* truths in a similar fashion, see his (1980). The arguments for the possibility of contingent *a priori* truths, nonetheless, have been a matter of controversy, but it is beyond the scope of our interest now to go into further details; but for a defence of traditional identification of contingent and *a posteriori* truths against Kripke's argument, see Casullo (1977).

<sup>22</sup> Kripke (1980), pp. 100-101.



not yet knowable to us. Thus, for example<sup>23</sup>, if Goldbach's conjecture - every even number greater than number 2 is the sum of two prime numbers- is true, it is necessarily true; if false, necessarily false. But no one knows now if it is true or false at all.

There is *prima facie* a difficulty with *apriority* in general as an epistemological notion in that it automatically raises the question: knowable *a priori* by whom? There seems to be no reason to exclude certain propositions being knowable *a priori* by some but *a posteriori* by others.<sup>24</sup> After all, if it is not necessarily the case that human *a priori* knowledge should exhaust all knowable set of necessary truths, it must remain true that there cannot be an extensional coincidence between necessary and *a priori* truths. Consequently, there might be many truths which are necessary yet not knowable to us.

In conclusion, as Dummett's formulation reveals, the problem of necessity has two components; the first relates to the metaphysical and the second to the epistemological aspect of the question.<sup>25</sup> The metaphysical aspect, among other things, generates an explanation aimed at providing us with the ground as well as the nature of necessity and necessary truths; therefore, of the nature of logical truths and falsehoods, of entailment and validity; and it also incorporates the questions linked to the justification of logical consequence or deductive reasoning. Therefore, the principal questions are: in which terms can one provide sufficient justificatory ground for the existence of these laws and their modal properties, and thus for the modal expressions standing for them such as "cannot", "must", "can only", "have to", and so on? On what grounds exactly are we to insist that if a proposition *p* is true, the negation of that proposition, not-*p*, must be false and therefore cannot be true, and likewise the rest of logical necessities? There

---

<sup>23</sup> *Ibid.*, pp. 34-35.

<sup>24</sup> See *ibid.*, p. 35, and Plantinga (1974), p. 7.

<sup>25</sup> See Forbes (1985), p. 216.

also seem to be some further questions crying out for an explanation: is there really such a thing as necessary truth? Why there should be logic at all? Or rather, how is logic possible at all?

The epistemological component of the problem, on the other hand, relates to the very possibility and nature of our knowledge of necessary truths: what is the ground and character of our knowledge of logical necessities? Are logical truths *a priori*? If the answer is yes, how is it possible at all that we can have *a priori* knowledge or the epistemic certainty of such truths?

In what follows, I shall be concerned primarily with the metaphysical problem of necessity.



**CHAPTER ONE**  
**NATURALISM, REALISM AND NECESSITY**

## 1. NATURALISM, REALISM AND NECESSITY

We have seen that there are certain propositions which do not just happen to be true but could not possibly be false, hence that they are *necessarily* true; among these necessary truths notably are truths of logic and mathematics. All these truths, it has been said, have the common property of being *necessarily* true; and therefore, one can hardly do justice to them, without, at the same time, taking into account their modal properties; that is to say, the notion of necessity is indispensable for one's grasping the idea of truth in logic or mathematics. If so, the locus of the problem of necessity is then *in virtue of* what are such propositions necessary?

In this chapter, I shall examine the naturalistic response to this problem. Therefore, the question is: can necessity -which we seem to inevitably attach to every logico-mathematical proposition- be naturalised? By naturalising necessity, I understand any attempt to explain the nature of logico-mathematical necessity on physicalist grounds. At the heart of any naturalistic account of necessity, therefore, would be the identification of necessity with certain physical facts; and thus the attempt to make no substantial distinction between necessary and contingent truths in an ultimate classification among propositions. We might also call this approach the *extensionalist* view of necessary truths.

### 1.1 Empiricism and Necessary Truths

Explaining the ground of necessary truths has been all in all a difficult task for the empiricists who espouse the view that all our knowledge comes from experience alone. Needless to say, there is an intimate, if not a necessary,

connection between the nominalist ontology and the empiricist epistemology. Essential to the empiricist theory of knowledge is the requirement of a causal theory of knowledge, that is, any possible object of knowledge, one way or another, must be accessible to sensory experience and thus fall within the range of physical objects.<sup>1</sup> The empiricist must thus explain how within the boundaries of the empiricist epistemology and the nominalist ontology we might come to know that some propositions are not only true, but necessarily true. The difficulty was clearly pointed out by Ayer:

Where the empiricist does encounter difficulty is in connexion with the truths of formal logic and mathematics. For whereas a scientific generalisation is readily admitted to be fallible, the truths of mathematics and logic appear to everyone to be necessary and certain. But if empiricism is correct no proposition which has a factual content can be necessary or certain. Accordingly, the empiricist must deal with the truths of logic and mathematics in one of the following ways: he must say either that they are not necessary truths, in which case he must account for the universal conviction that they are; or he must say that they have no factual content, and he must explain how a proposition which is empty of all factual content can be true and useful and surprising.<sup>2</sup>

J. S. Mill seems to have taken, in Ayer's formulation, the first line of thought to show that so-called necessary truths are not necessary but contingent truths, inductive generalisations, of some special kind. Mill's understanding of mathematical necessity is strongly wedded to his views concerning the ontological character of mathematical entities such as numbers. Therefore one should first consider his theory of numbers. Numbers, in Mill's view, are to be considered to be the properties of physical objects; they are supervenient upon them for their existence:

---

<sup>1</sup>Here we must exclude the idealist types of empiricism such as Berkeley's.

<sup>2</sup> (1936), p. 97.



The fact asserted in the definition of a number is a physical fact. Each of the numbers two, three, four, &c., denotes physical phenomena, and connotes a physical property of those phenomena. Two, for instance, denotes all pairs of things, and twelve all dozens of things, connoting what makes them pairs or dozens; and that which makes them so is something physical...<sup>3</sup>

What, then, is that which is connoted by a name of number? Of course, some property belonging to the agglomeration of things which we call by the name; and that property is the characteristic manner in which the agglomeration of things is made up of, and may be separated, into parts.<sup>4</sup>

Evidently, Mill favours a physicalist (or nominalist<sup>5</sup>) ontology, which restricts the realm of "what there is" merely to concrete, physical individuals; therefore, it rejects the possibility of there being abstract objects. Thus, in attributing numbers to the collection of things, on this view, one must refer only to aggregates of physical objects and not to the numbers "in the abstract"<sup>6</sup>.

However, Mill seems to have been well aware<sup>7</sup> of one of the principal difficulties concerning logico-mathematical truths, that is: how a finite set of general principles can be applied to infinitely many logico-mathematical instances. Thus, for example, in arithmetic, one must demarcate a numerical

---

<sup>3</sup> (1967), III, § 5.

<sup>4</sup> *Ibid.*, III, § 5.

<sup>5</sup> In calling Mill's view of numbers "nominalistic", as Skorupski (1989, pp. 136-137) notes, one ought to distinguish this from the nominalism which holds that syllogistic reasoning and the propositions of arithmetic express purely verbal facts, which Mill criticizes.

<sup>6</sup> Mill *op. cit.*, III, § 5.

<sup>7</sup> Thus Mill says: "There is something which seems to require explanation, in the fact that the immense multitude of truths (a multitude still as far from being exhausted as ever) comprised in the mathematical sciences can be elicited from so small a number of elementary laws" (*ibid.*, III, § 5).

formula such as  $2 + 3 = 5$ , from the general laws which apply to all numbers<sup>8</sup>. But faced with this question, that is, what is the nature of these general laws, the explanation Mill offers is also naturalistic. Since, according to Mill, the very general law of arithmetic, "[t]he sum of equals are equals"<sup>9</sup> (and every arithmetical operation is either an application of this law or can be deduced from it), to which arithmetic owes its deductive character, is co-extensive with natural phenomena; therefore, any arithmetical truth "must be considered an inductive truth or law of nature of the highest order"<sup>10</sup>. For Mill, accordingly, one believes on the grounds of this inductive law and the definitions of the numbers that, for example, five and two equal to seven, and "... arrive[s] at the conclusion (as all know who remember how they first learned it) by adding a single unit at a time:  $5 + 1 + 1 = 7$ ; and again  $2 = 1 + 1$ , therefore  $5 + 2 = 5 + 1 + 1 = 7$ "<sup>11</sup>.

It is worth noting that there is said to be a significant connection between the idea that truths of arithmetic are *empirically*-based and that their certainty is grasped on *inductive* grounds; the only way to explain the ground of necessary propositions therefore would involve inductive evidence of some sort. Then, it must follow that, on this account, there is no substantial distinction between empirical and non-empirical truths save the fact that the inductive evidence provided is variable. Some propositions are supplied with strong and some with weak observational evidence; in a word, what distinguishes a so-called necessary truth from a contingent one is a matter of degree.

Mill's idea that numbers are to be identified with the properties (or of aggregates) of physical objects has been radically challenged by Frege whose

---

<sup>8</sup> Frege (1950), § 5.

<sup>9</sup> *Op. cit.*, III, § 5.

<sup>10</sup> *Ibid.*, III, § 5.

<sup>11</sup> *Ibid.*, III, § 5.



principal counterargument rests on the idea that numbers differ from the other properties exemplified by physical objects. Thus, even though it is determinable whether a physical object  $x$  exemplifies an ordinary property  $F$  (such as red or blue) independently of our choice; one cannot in the same way determine whether  $x$  has or exemplifies a number  $n$  regardless of a particular consideration in mind. So, for example, if we ask someone whether this or that physical object is green, he would have an answer simply by looking whether the object in question is green or not, whereas if he is given a pile of playing cards and asked to find their number, he would wonder whether we wish to know the number of cards or the number of the packs of the cards, etc. But then it would be seen that the pile of playing cards exemplifies more than one number; thus whether it exemplifies the number 1, or 100 cannot be true independently of our choice to describe the pile of cards in a particular way. Similarly, Frege argues, even though there is no physical property corresponding to the difference between one pair of boots and two boots, nevertheless *one pair* and *two* are different concepts.<sup>12</sup> All this is meant to show that numbers cannot possibly be the properties of physical objects and their aggregates.

Suppose we agree with Frege on the propounded disanalogy between numbers and the properties of physical objects, and thus that physical objects cannot be said to exemplify a number without a description, cannot we, nevertheless, think that in ascribing a number to physical objects and their aggregates on each description there is still a physical phenomenon as a counterpart to numerical predications?

Such a line of argument seems to be taken by Armstrong as he suggests we do identify numbers with the structural properties of physical objects. Given that on each numerical attribution there would be counterpart structural properties of physical objects, then, all numbers would be the

---

<sup>12</sup> Frege, *op. cit.*, §§ 21-25.

properties of physical objects. Thus, for example, if a page can be composed of distinct parts such as  $x, y, z, \dots$ ; then the page's being *two-parted*, *three-parted*, *four-parted* and thus conceivably being *infinitely-parted*, on this view, would be considered as the structural properties of the particular (physical) page. Given this, one can agree with Frege that physical objects, unlike the rest of properties exemplified by them, exemplify indefinitely many numbers. Nevertheless, all of these numbers would be considered as the structural properties of physical objects.<sup>13</sup>

However, there are a few difficulties with this argument. First of all, essential to it is the supposition that physical objects can be divided infinitely, but, as Armstrong himself acknowledges, it is likely that "there is an upper limit to the complexity of the universe"<sup>14</sup>, whereas, this is not so in the case of numbers. It is logically possible that there is a terminus for the complexity of the physical world where physical individuation comes to an end, however, it is logically impossible that numbers are subject to such a limitation; they have no terminus.

In response to this difficulty, Armstrong proposes that the above argument can be amended such that numbers are not to be "identical with the properties, *being two-parted*, *three-parted*, etc. ...[But] with the *logically possible* set of properties, *being two-parted*, *being three-parted*, etc. ...To talk about the "existence" of numbers would be simply to talk about the logical

---

<sup>13</sup> See Armstrong (1978), p. 72. It might be a question to what extent Armstrong's argument can be taken as a defence of the Millian position as he is in general more sympathetic to the Aristotelian ontological intuitions than the Millian empiricism, but given his overall position concerning universals (abstract objects) that they exist if and only if physical objects exist, it seems to me that he shares the same naturalistic comprehension with Mill. A similar defence of the Millian account of arithmetic -though a modified one- has been taken by G. Kessler who argues that a number is to be identified with "a special relation which holds between aggregates and properties that pick out parts of those aggregates". See his (1980), p. 69.

<sup>14</sup> (1978), p. 72.



possibility of corresponding formal properties."<sup>15</sup> This answer, it seems to me, is clearly unsatisfactory for the purposes of naturalism. For the task the naturalist set for himself was to demonstrate that numbers are the properties of physical particulars or the structural properties of these particulars. It can hardly be claimed that numbers are to be identified with the logically possible set of formal properties corresponding to the structural properties of physical objects without begging the question. In other words, the kind of possibility involved, from a naturalist viewpoint, must be explained by reference to physical possibility rather than logical possibility unless the very ground of the latter is satisfactorily argued to be grounded in the former.<sup>16</sup> But there is a *prima facie* difference between what is physically (naturally) possible and what is logically possible, as there are many things which are conceivable but not physically possible. Thus, even though it is physically impossible for human beings to run faster than the speed of light, nevertheless this is logically possible; there is no contradiction in thinking that human beings could have such an ability. The same cleavage is obvious in the case of numbers too. We do not have any difficulty in envisaging in extending numbers infinitely which, it might be said, involves logical necessity, whereas we do not have the same assurance in the physical domain.

There is another Fregean objection to the Millian empiricist.<sup>17</sup> The Millian can presumably show the physical counterpart of number 3 in natural phenomena simply by displaying the collection of three objects which could be taken to be causally and thus empirically responsible for one's having the idea of the number 3, but if that is true, how are the naturalists to account for number 0 on the so-described natural phenomena basis? Is there any 0

---

<sup>15</sup> *Ibid.*, p. 73.

<sup>16</sup> Armstrong (*ibid.*, pp. 39-40) attempts to explain the ground of logical possibility in semantic or *de dicto* terms, however, it is not clear to me how even such a theory can be wedded to the naturalistic expectations.

<sup>17</sup> Frege *op. cit.*, § 8.



physical object which might sensibly be observable? Or is there any physical fact which corresponds to the number 0? Perhaps it would be said that the number 0 corresponds to a negative fact, that is, to the state of affairs of which no number bigger than 0 is predicable. Thus, for example<sup>18</sup>, a room with no physical objects in it can be said to contain 0 chairs in it; the very physical phenomenon of the room's being empty is the physical fact corresponding the number 0. Suppose that this is indeed true, can we really extend such an empiricist account to an overall theory of mathematical truths and objects?

It does not seem so. If that had been the case it would have been hard to account for larger numbers such as 678460456, or even larger numbers. By the same token there seems to be no reason why we should think that one cannot sensibly refer to the arithmetical equation of  $9,000,000 = 8,999,999 + 1$  unless we observe a collection of physical objects exemplifying such a property?<sup>19</sup>

Consequently, it seems to me that Frege is right when he argued that there is a perplexity in the Millian account of arithmetical truths in that it confuses "the applications that can be made of an arithmetical proposition, which often are physical and do presuppose observed facts, with the pure arithmetical proposition itself"<sup>20</sup>. Thus, for example, by adding three apples to six apples we shall get nine apples, but this cannot in effect explain or is not the meaning of the arithmetical proposition that  $3 + 6 = 9$ . Accordingly, if one follows the view that numbers are the properties of physical objects one must restrict the use and applicability of arithmetical propositions somehow to observable properties of physical objects or phenomena. But how? There is no doubt, in saying "there are one table and three chairs in the kitchen" one can observe the reference of number one, the table, and number three as there are three observable chairs, but how are to explain the numerical predications

---

<sup>18</sup> Armstrong *op. cit.*, p. 74.

<sup>19</sup> Frege *op. cit.*, § 7.

<sup>20</sup> *Ibid.*, § 9.

in cases such as, "it is now eleven o'clock", "there is only one way to overcome that problem", "two dramatic events happened yesterday", etc.,? Thus, as Frege rightly pointed out,

we can speak even here [i.e., on the level of events] of "parts"; but then we are using the word not in the physical or geometrical sense, but in its logical sense, as we do when we speak of tyrannicides as a part of murder as a whole. This is a matter of logical subordination. And in the same way addition too does not in general correspond to any physical relationship.<sup>21</sup>

Likewise, in order to see whether an arithmetical proposition such as  $2 + 2 = 4$ , or  $2996 + 567 = 3563$ , is (necessarily) true we do not need to observe all possible instances of that formula.

Given that numbers can hardly be properties of physical objects in the way the naturalist conceives, we can now return to the Millian contention that arithmetical truths are inductive truths or laws of nature of the highest order.

One of the reasons Mill provides for this claim is that arithmetical truths are co-extensive with natural phenomena; that is perhaps to say that there is no conflict between arithmetical and physical reality. This, indeed, might be true, but I do not think that this is a good reason for concluding that arithmetical truths are inductive and presumably contingent, because there does not seem to be a necessary connection between the fact that an arithmetical truth such as  $2 + 2 = 4$  is coextensive with natural phenomena and its being an inductive truth. In other words, it is perfectly conceivable that necessary truths should be coextensive with physical reality and still be necessary and thus non-inductive; there is no reason why these two things should not be compatible and hence no reason for taking necessary truths, on these grounds, to be inductive or empirical truths.

---

<sup>21</sup> *Ibid.*, § 9.



Furthermore, the idea that arithmetical truths can be considered in the same boat as empirical and thus inductively valid propositions is not persuasive. So, for example, the proposition that "all swans are white", if true at all, is an inductive truth depending on the empirical evidence obtained; it can never exclude the possibility of there being somewhere unobserved "black swans". Hence, no matter that the observational evidence is highly supportive of the proposition that "all swans are white", this does not suffice to consider it as a necessary proposition. So, while it is possible that, for instance, there should be scientific hypotheses based on exceptionless inductive generalisations, nevertheless such hypotheses still would be at best highly probable, not certain.<sup>22</sup> On the other hand, unlike propositions stating empirical generalisations, the certainty of an arithmetical truth such as  $2 + 2 = 4$ , as Russell pointed out,<sup>23</sup> can be drawn from one single instance without further enumeration of other instances.

Consequently, there is a strong disanalogy between empirical-inductive truths and the truths of arithmetic. The same conviction is equally true for the truths of logic or the validity of logical forms; thus it can rightly be argued that it is a matter of necessity rather than probability that *the law of contradiction* is true, namely, that a proposition cannot be true together with its negation,  $\sim(p \& \sim p)$ .<sup>24</sup> Or, again, the necessity involved in an argument such

---

<sup>22</sup> Ayer *op. cit.*, p. 100.

<sup>23</sup> (1967), p. 47. Moreover, the very idea of "induction" in the present context can hardly escape the charge of circularity in that it depends on probability and given that one cannot explain probability without presupposing numbers and arithmetical truths (Frege, *op. cit.*, § 10); again, the principle of induction itself cannot in turn depend on induction for its validity (Russell, *op. cit.*, p. 47).

<sup>24</sup> Similarly, it is unclear how such a physicalist picture can account for *the law of contradiction* as in saying that  $p$  one also thinks about the negation of  $p$ , i.e., not- $p$ , but in the natural phenomena only one of these conditions, either  $p$  or not- $p$ , obtains; no state of affairs  $p$  and the state of affairs not- $p$  together take place in the world. Hence, there is not a physical fact (in the world) *in virtue of which* one might think why we consider both  $p$



as from the premises that *All men are mortal*, and *Socrates is a man*, it *necessarily* follows that *Socrates is mortal* can hardly be a matter of probability, therefore, cannot be an inductive truth even though the truth of the premises is clearly inductive. Thus, unlike inductive truths, the truths of logic and mathematics offer a certainty which makes us think that they *cannot* be otherwise; therefore, *necessarily* true. So, it seems correct to think that the idea of *induction* cannot accommodate our *necessity* intuition about logico-mathematical truths. There is no reason why a highly probable empirical (contingent) proposition cannot be thought to be otherwise, whereas it is of the character of necessary truths that one cannot conceive them to be otherwise; and this difference seems to be in itself sufficient reason for rejecting Mill's view that necessary truths are inductive truths and thus, that they have the same truth-conditions as empirical hypotheses.

## 1.2 Can we dispense with necessity?

The Millian idea that necessary truths are inductive or that they are laws of nature of the highest order can be seen as one endeavour to secure the naturalistic intuition. Another naturalistic attempt, which has been originated by Quine, is to account for the existence of necessary truths in "holistic" terms. The principal target of the Quinean argument is to show that given a global-holistic empiricist picture of reality there would be good reasons to think that one should dispense with necessary truths if the empirical evidence obtained obliges us to do so.

In Quine's words, the fabric of all our knowledge is like a field whose boundaries are underdetermined by experience where some statements are

central to the field while some are peripheral.<sup>25</sup> On this view, therefore, the distinctive character of necessary truths is that they are more theoretical in that they "may be thought of as relatively centrally located within the total network"<sup>26</sup>. But, since all our knowledge is underdetermined by experience and thus "[t]he edge of system must be kept squared with experience"<sup>27</sup>, no statement is ultimately immune from revision as

...it becomes folly to seek a boundary between synthetic statements, which hold contingently on experience, and the analytic statements which hold come what may. Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. Even a statement very close to the periphery can be held to be true in the face of recalcitrant experience by pleading hallucination or by amending certain statements of the kind called logical laws. Conversely, by the same token, no statement is immune to revision. Revision even of the logical law of excluded middle has been proposed as a means of simplifying quantum mechanics; what difference is there in principle between such a shift and the shift whereby Kepler superseded Ptolemy, or Einstein Newton, or Darwin Aristotle? <sup>28</sup>

Quine too does not see a substantial difference between necessary (logical) and contingent (empirical) statements. Indeed he seems to have made this point even clearer when he raised the question, "...is this [logical] necessity somehow different in kind from what can be attributed to the ordinary truths of physical theory or other natural sciences?"<sup>29</sup> To this Quine is inclined to say "no":

---

and the negation of *p*, (two states of affairs) when thinking about one (natural) fact (one state of affairs). See Hahn (1980a), pp. 40-41.

<sup>25</sup> (1953b), p. 42.

<sup>26</sup> *Ibid.*, p. 44.

<sup>27</sup> *Ibid.*, p. 45.

<sup>28</sup> *Ibid.*, p. 43.

<sup>29</sup> (1963), p. 75.



In principle... I see no higher or more austere necessity than natural necessity, or our attribution of it, I see only Hume's regularities, culminating here and there in what passes for an explanatory trait or the promise of it.<sup>30</sup>

In the face of the empiricist dilemma mentioned above, logical positivists such as Ayer and Carnap tried to account for the existence of necessary truths in terms of analyticity, that is, for any proposition to be necessary it must be so in terms of being analytic, i.e., in virtue of the meaning of the words involved. Quine, however, sees an empiricism of this type as involving non-empirical tenets such as the distinction between analytic and synthetic propositions, and yet no one has given a non-questionbegging definition of analyticity. However, Quine too seems to have thought that if there is anything such as necessity it must be accountable for in terms of analyticity<sup>31</sup> and consequently there must be an exhaustive coincidence between necessary and analytic propositions.

In general, Quine's opposition to the theory of necessity in terms of analyticity, one might say, has two motivations: (i) he has some radical doubts about intensional entities such as objective *meanings* independent of natural languages (the thesis of indeterminacy of translation<sup>32</sup>) and therefore, (ii) he thinks that there cannot be an account of necessity solely in terms of the meanings of the words involved. If one cannot therefore make a legitimate cleavage between analytic and synthetic propositions, Quine seems to have thought, one should altogether dispense with idea of logical necessity, namely, with the idea that there is a definite type of proposition to be held to be true no matter what.

---

<sup>30</sup> *Ibid.*, p. 76.

<sup>31</sup> Bealer (1982), pp. 204-205.

<sup>32</sup> For the thesis of the indeterminacy of translation, see Quine (1960), ch. 2, pp. 26-73; and for a general criticism of this thesis, see Katz, (1990), ch. 6, pp. 203-233.



What seems to be problematic, however, is whether one can legitimately move from the fact that there are no analytic propositions to the claim that there are no necessary propositions. Why should one think that the only way to explain the ground of necessary propositions is their analyticity? Obviously, it is one thing to say that one cannot make sense of the notion of analyticity -and indeed in this sense one might agree with Quine that one cannot give a non-troublesome definition of the notion-, but still it is an altogether different thing to say that there are no necessary truths. As a matter of fact, as we shall examine in the next chapter, since both the idea that necessity can be defined on the basis of analyticity and the equation between analytical and necessary truths can be shown to be erroneous, Quine seems to have based his motivation for rejecting necessary truths on insecure grounds.

Another problem with Quine's argument is the notion of *revisability*. Again why should it follow from the claim that  $p$  is revisable that  $p$  is not necessary, or *vice versa*? Clearly the question of "giveupability" or "ungiveupability" can be considered as a matter of epistemic rationality in the sense that there might be right epistemic circumstances  $C$  under which  $S$  is justified in giving up a necessary proposition, but this can hardly make any difference to its necessity; that is to say, there does not seem to be a necessary connection between the necessity of a proposition and its being revisable under certain circumstances; hence an equation between "unrevisability" and "necessity" seems to involve a confusion.<sup>33</sup> The "revisability" or "giveupability" of a proposition  $p$ , therefore, would mean to withhold  $p$  only in the face of certain contingent circumstances under which  $S$  is not clear how  $p$  is true of certain facts. However, given that  $p$  is necessary does not mean that  $S$  has to be clear how  $p$  applies all its contingent instances (states of affairs), it can hardly be concluded on this ground that  $p$  itself is not necessary. As a

---

<sup>33</sup> Plantinga (1974), p. 3.

result, even though necessary truths might be revised, they are still necessary.

More importantly, however, is it really the case that no statement is immune from revision? It is true that the law of bivalence ( $p \vee \text{non-}p$ ) has been proposed for abandonment when applied to vague statements we are not sure about their truth-values,<sup>34</sup> but is it really thinkable that just any statement can be subjected to revision? Can we, as a matter of fact, conceive a possible world in which it would be rational to give up the most basic law of logic, that is, *the law of contradiction*,  $\sim(p \ \& \ \sim p)$ ?

If the answer is "yes", then, on the face of it, it would be conceivable that just any proposition  $p$  is true, but the negation of that proposition,  $\text{non-}p$ , would also be true. Thus, the proposition that *no statement is immune from revision* would be true together with its negation that *every statement is immune from revision*. But could it have been the case that every statement is both true and at the same time false? If not, then there seems to be at least one *a priori* (necessary) truth which is a version of the law of contradiction, that is, the principle that: *not every statement is both true and false*. Had this minimal principle of the law of contradiction been false, on the other hand, it would have been true that *every statement is both true and false*; consequently, there would not be such a thing as rationality inasmuch as the

---

<sup>34</sup> As for the question of revisionism, the realist, as a defender of the classical logic, might follow different strategies. Thus, for example, with Kripke (see Putnam 1983b, p. 136) he might ask, if nothing is really taken to be *a priori* why should we not revise the vague statements in question instead of the principle of bivalence? On the face of it, there seems to be no reason why one should revise logical (conceptual) truths rather than non-logical (factual) truths. Or, a more promising procedure for the realist, it seems to me, is to consider the problem of vagueness in epistemological context, that is, to deal with the problem of vague statements, therefore the question of revision of the law of bivalence, in reference to our epistemic inaccessibility, i.e., to consider it as a consequence of our ignorance. For such an argument, see Williamson (1994), especially chs. 7 and 8.



consistency requirement would obviously have been infringed.<sup>35</sup> Accordingly, granted that rationality cannot be established in terms of inconsistency, we might say the revisionist claim that *no statement is immune from revision* is false, as there is no conceivable circumstance in which the minimal principle of the law of contradiction is untrue, or perhaps necessarily false.

But can it coherently be argued that just any statement is revisable? The answer must be "no" as it seems to me that such a thesis is self-referentially incoherent in that when the revisionist says that no statement is immune from revision, nevertheless, he presupposes that there is at least one statement which is not revisable, that is, that *no statement is immune from revision*. Hence, the revisionist position itself seems to hold one *a priori* (necessary) truth in repudiating the idea of apriority.

Yet Putnam has characterised charging the revisionist position with self-refutation as a "cheap shot" in the sense that the revisionist principle that *no statement is unrevisable* is itself not argued on *a priori* grounds, rather on the basis of inductive generalisations from the history of science.<sup>36</sup> But this seems to be false, simply because of the fact that the certainty of the statement that *no statement is immune from revision* cannot be established on inductive grounds. Certainly Putnam would have been right had the revisionist contention been that the law of bivalence is revisable in the face of the consideration that it remains unable to explain certain scientific cases. As seen, however, the revisionist assertion is indeed more than that; for, to maintain that in principle *no statement is unrevisable* entails that any logical principle including the law of contradiction is revisable. But the trouble is that it is difficult to see how the revisionist principle -including the revisability of the law of contradiction- can satisfactorily be explained on

---

<sup>35</sup> Putnam (1983a), pp. 100-101.

<sup>36</sup> *Ibid.*, p. 98.



inductive grounds. Since the very idea of inductiveness implies probability rather than certainty; therefore, to say that *no statement is immune from revision* on this ground would mean that the revisionist principle itself is not immune from revision; but this does not seem to be what the revisionist has in mind. Therefore, inductive grounds from the history of science do not suffice to establish the certainty of the revisionist principle that no statement is immune from revision, consequently, there remains no reason why the naturalist claim that *no statement is immune from revision* should not be vulnerable to the charge of self-referential incoherence.<sup>37</sup>

Finally, let us consider the basic Quinean argument to the effect that, given the holistic empiricist picture of human knowledge, we can dispense with necessary truths (therefore, logical laws, the rules of inference). In other words, in order to simplify the employed theory in the face of recalcitrant experience, the Quinean global empiricist seems to allow that one can modify or indeed give up the logical laws underlying the theory as in principle no statement is immune from revision. But can one really dispense with the whole idea of logical necessity?

It does not seem so. As Wright vividly argued, there seems to be some kind of logical necessity involved even on the proposed Quinean picture, which cannot in turn be explained by reference to the global empiricism. To depict the Quinean proposal, let  $T$  be some theory and  $L$  be the logic underlying  $T$ ; and  $I \rightarrow P$  a conditional where  $I$  stands for certain initial conditions for  $T$ ,

---

<sup>37</sup> Apart from such a charge, in fact, the whole project of global empiricism, or rather of "epistemology naturalised" has recently come under severe criticisms to the effect that it is self-refuting or incoherent. Thus, for example, Bealer has argued that the three basic tenets of naturalism (namely, that (i) all our knowledge is empirical, (ii) the holistic principle, and that (iii) only natural sciences can justifiably provide us with the simplest comprehensive theory of experience or observation) themselves do not satisfy the epistemic criteria they require, that is, they are not justified on the very naturalistic grounds they propose, hence naturalism is self-defeating. See Bealer (1992), pp. 99-143; and also Bonjour, (1994), pp. 283-300.

while  $P$  describes possible predictions to be made relative to these initial conditions. To designate this claim as  $W$ , we seem to end up with a formula such as  $W: T \vdash L \rightarrow P$ . Given this scheme, an experience  $E$  would be recalcitrant if it assents to  $L$  together with the negation of  $P$ . Evidently, even though we might think that  $L$  is revisable as a response to  $E$ ,  $W$ , on the face of it, has nothing to do with  $L$ , and furthermore,  $E$  would be thought to be a recalcitrant experience if and only if  $W$  is presupposed. That is,  $W$  is both independent of  $L$  and necessary to make sense of the proposal in question. But if so, what is the status of  $W$ ? Or, in which terms can the global empiricist account for the certainty of  $W$ ? Given that  $W$  itself cannot in turn be explained on the Quinean holistic empiricism, then *there seems to be at least one statement whose existence is a matter of formal proof and therefore establishable independently of the proposed empiricist scheme*<sup>38</sup>. By the same token, our belief in the certainty that 'if  $T$ , then if  $A$ , then  $B$ ' cannot be grounded in empirical terms as we have no experience of the truth of the conditional, 'if  $A$ , then  $B$ ', yet, on the other hand, for any predictive theorising it seems inevitable to appeal to that kind of coherent conditional pattern to test the theory. And the very idea of coherence and conditionals articulating how  $B$  can be derived from  $A$ , cannot be explained on the (holistic) global empiricist account as they involve the idea of logical consequence or entailment -i. e., given  $A$ , therefore  $B$ ; or if  $A$ , then necessarily  $B$ - and hence the idea of logical necessity<sup>39</sup>. Instead, we might rightly be inclined to think that the idea of necessity involved in "logical consequence" and "entailment" should be associated with traditional idea of validity of argument forms or the principles of inference. They are what has traditionally been taken to be *the elements of proof* and thus irrespectively true of what is considered to be the case in the

---

<sup>38</sup> Wright (1986), pp. 187-194.

<sup>39</sup> *Ibid.*, p. 194; and Wright (1980), pp. 318-341.



factual realm.<sup>40</sup> Accordingly, given that the notion of logical necessity, in this sense, is *prior* to any theorising activity, once again, logical necessity seems to be indispensable; and if so, the contention that necessary truths can be naturalised on the revisionist grounds and thus that logical necessity is dispensable loses its credibility.

### 1.3 Intensionalism *versus* Extensionalism

Ontological and modal intuitions, as shown, are intimately related. The naturalist view of necessary truths, basing itself on a nominalistic ontology which denies there being any objects other than physical ones, takes certain physical facts as responsible for the presence of necessary truths. But we have seen that such a position is mistaken as it is hard both to understand the reality of numbers solely on the grounds of physical objects and to ground the distinctive properties of necessary truths on contingent propositions. In this section, I shall try to make the relation between ontology and modality clearer and also to give some further reasons why nominalistic (naturalistic) ontology cannot explicate necessary truths.

Presumably the crucial difference between naturalistic and non-naturalistic accounts, as Katz pointed out, "is that naturalistic accounts of the formal sciences must sacrifice the necessity of their truths, whereas the non-naturalistic account can preserve it"<sup>41</sup>. Thus, it seems that non-naturalists (realists) can account for the necessity of necessary truths along with their admission of abstract entities whose existence, unlike physical objects, is necessary and eternal. Thus, realists

---

<sup>40</sup> See McFetridge (1990a) pp. 148-154.

<sup>41</sup> (1990), p. 155.

...can explain the uniqueness of mathematics and logic in terms of their position that mathematical and logical truths are absolutely necessary ... on the basis of their view that mathematics and logic are about abstract objects. Abstract objects exist necessarily and have their intrinsic properties and relations necessarily, and hence true statements about the intrinsic properties and relations of an abstract object in this world cannot be false of that object in any other.<sup>42</sup>

In other words, naturalists are ontological extensionalists whereas realists are ontological intensionalists in the sense that on the former view there are only concrete objects and sets, whereas on the latter view there are abstract as well as physical objects. Thus, for example, Frege clearly held the view that one must be committed to the existence of numbers as abstract objects as they stand for (are the references of) singular terms<sup>43</sup> which are used in arithmetical statements of identity such as "the number of *F*'s is (the same as) the number of *G*'s", and predication<sup>44</sup>. Thus, consider 'there are

---

<sup>42</sup> *Ibid.*, p. 156.

<sup>43</sup> The definition of a "singular term" in this context can be controversial; it can both be given a syntactic (see Wright 1983, pp. 53-64) as well as semantic definition. (For a general discussion of singular terms, see Hale 1987, ch. 2, pp. 15-44). However, having a semantic definition of singular termhood in mind, Hale formulates Frege's argument for the existence of numbers as follows:

- (1) If a range of expressions function as singular terms in true statements, then there are objects denoted by expressions belonging to that range.
- (2) Numerals, and many others numerical expressions besides, do so function in many true statements (of both pure and applied mathematics).

Hence

- (3) There exist objects denoted by those numerical expressions (i.e. there are numbers).
- (*Ibid.*, p. 11)

<sup>44</sup> See Frege, *op. cit.*, §§ 55-76; and also Wright (1983), pp. 105-129. Even though the history of intensionalism can rightly be traced back to Plato's theory of forms (ideas), modern intensionalism is usually taken to be rooted in Frege's celebrated distinction between sense (*Sinn*) and reference (*Bedeutung*) according to which, two expressions might have the same reference (extension) even though they express different senses



twelve apostles' and 'the apostles are twelve'; here, we have the singular term 'twelve' which is common to both sentences and hence corresponds to a property (an abstract object) whose instances include all and only properties having 'twelve' instances. And this property is what the intensionalist takes to be the definition of number 'twelve'.<sup>45</sup>

Intensionalism thus maintains that there are intensional (abstract) objects such as *properties*, *propositions* etc., over and above extensional objects; intensional entities are no less real than physical objects and they cannot be identified with their extensions. So, to analyse, for example

$$(1) 3 + 5 = 8,$$

numbers such as 3, 5, 8 are to be identified with properties, '+' with the addition relation as well as (1), as a proposition, is an intensional object. All these objects, in the intensionalist view, have the properties they have essentially; their properties are purely logical and thus fixed *prior to* the existence of any extensional object exemplifying them; therefore, intensional objects are considered to be independent of their extensions. By the same token, the concept of *logical consequence* would be seen as a matter of the properties of intensional objects and relations obtaining among them. This is why, on this understanding, entailment statements have a predeterminate relation; once certain things are allowed in the first place, one must accept what necessarily

---

(intensions). Thus, although "the morning star" and "the evening star" have two different senses, they have the same reference, that is, they designate the same object, i.e., the planet Venus. Now of course, given that "the morning star is the evening star", ( $a = b$ ), has a different cognitive value than "the morning star is the morning star", ( $a = a$ ), it should follow that the sense of an expression cannot be identified with its reference. Therefore, on the intensionalist account, expressions have senses over and above the fact that they might have references; hence, the sense of an expression must be distinguished from its reference; the sense of an expression cannot be identified with its reference. (See Frege, 1952).

<sup>45</sup> See Bealer (1982), p. 124.

follows from them, and this relation is necessary and objective in the strictest logical sense.

On the other hand, extensionalism, as a view which restricts the reality -what there is- to no more than what is physical, identifies the meaning (intension) of an expression with its references (extensions). Thus, the meaning of the term "table" is to be identified with its extension, that is the set of all tables. Accordingly, it identifies necessary truths and objects with the extensional (physical) entities which exemplify these properties. Thus for example, let us consider the proposition (1). The extensionalist would identify number 3 as the set of physical objects with three members, the number 5 with the set of physical objects having 5 five members, and the proposition (1) itself would be identified with the set of physical objects exemplifying *the property of being such that  $3 + 5 = 8$* .

But there seems to be good reasons for thinking that extensionalism cannot account for the modal properties of necessary truths. First of all, why, for instance, should the relations obtaining within the mathematical proposition such as  $2 + 2 = 4$  be necessary? Given that the truth of such a proposition, on this account, is to be verified by reference to its set of physical instances, although one can see on the extensionalist grounds how these instances exemplify these properties and thus that they are to be classified as instances of such a proposition, nonetheless, there seems to be no reason why such a relation *must* hold and therefore such a proposition should be necessarily true.

Secondly, the extensions of natural numbers, the set of physical objects, taken by extensionalists to be the meaning of numbers, are, to be sure, contingent. That is to say, they could have been different than they have actually happened to be, or they even could have failed to exist. But, then, the extensionalist is committed to the view that had the extensional instances of properties such as numbers been different, the numbers would also have been

different; and also had there been no extensional instances, there would be no numbers (properties in general). But it is perfectly conceivable that there should be different extensional instances of numbers, or no extensional instances at all, but it is hard to see how this could have been true in the case of the properties (objects) such as numbers and fundamental logico-mathematical relations obtaining among them.<sup>46</sup> Evidently, there is no reason why  $2 + 2 = 4$  should not have been true even though tangible-observable extensional instances, that is, the aggregates exemplifying the state of affairs such that  $2 + 2 = 4$ , were different (in kind) than they are or failed to exist.

Accordingly, we might think that intensional entities such as properties cannot be identified either with the set of all their instances in the actual and possible worlds,<sup>47</sup> or with functions if that would mean, for example, identifying a property  $F$  (or a number) as a function from the set of objects exemplifying  $F$  in one possible world (the actual world)  $W$  to the other objects exemplifying  $F$  in other possible worlds  $W^*$ . For, we might say, the objects exemplifying  $F$  are contingent objects, hence, had they failed to exist, or had they have been different, their function would not come into existence, or would have been different<sup>48</sup>. However, properties (as intensional entities) cannot be other than they are even though their instances can be different, or even if there are/ were no particulars exemplifying them.

Therefore, the intensionalist objection to extensionalism is that unless the existence of intensional objects is allowed, no justice can be done to our intuition of necessary propositions. In fact this intuition can be fortified. Thus, the intensionalist can argue that extensions are insufficient in order to catch the sense that one needs to attach to the proposition

---

<sup>46</sup> Indeed this is the neo-Fregean conception of natural numbers; see *ibid.*, p. 123.

<sup>47</sup> D. Lewis (1986, p. 50) seems to have identified a property  $G$  with the set of  $G$ 's instances in the actual and possible worlds.

<sup>48</sup> Pollock (1984), pp. 72-73.



(2) For any  $x$ , if  $x$  is trilateral, then  $x$  is necessarily a triangle.

To be sure, it is necessarily true that whatever object has the property of being a triangle has also the property of being a trilateral, in other words, inasmuch as these two properties are necessarily co-extensive

(3) There are no possible worlds in which  $x$  is trilateral but not triangular.

On the face of this, the extensionalist must hold that the property of being a trilateral and the property of being triangular are synonymous or even identical as they are necessarily equivalent. But, the intensionalist would argue that these two properties are obviously not synonymous, or identical, as the property of being an angle is *necessarily* different from the property of being a side and their instances are necessarily different,<sup>49</sup> even though an instance of the one involves an instance of the other.

Intensional objects in many cases seem indispensable; indeed, this is something which has been granted even by the empiricist philosophers. And the basic driving force behind such an acknowledgement is the apparent role that mathematical truths -therefore, intensional entities- play in the natural sciences for the predictions made by scientific theories, or the calculation of probabilities and so on, which provides one with sufficient evidence for truth of mathematical propositions.<sup>50</sup> However, some of them such as Carnap<sup>51</sup> hold the view that, although they are indispensable, this should not be taken to conflict with the basic empiricist tenets. Accordingly, abstract objects are to be

---

<sup>49</sup> See Bealer (1982), p. 3; and Katz and Katz (1977), p. 88. It can similarly be argued that since the extensionalist does not allow there to be intensional objects, he is necessarily committed to the idea that certain meaningful expressions are meaningless such as "square circle" solely on the grounds of the fact that they (necessarily) fail to have extensions. See *ibid.*, p. 88.

<sup>50</sup> Here, I shall not go into a detailed exposition of how mathematical truths are crucial to the scientific investigations; but, for a detailed account of this issue, see Sober (1993).

<sup>51</sup> (1956a), pp. 205-221.

considered within the linguistic conventionalist framework without a genuine ontological character to which the realist is committed.

However, we might have doubts here. For, as Putnam pointed out, some abstract objects are crucial to one's understanding of certain logical truths; thus, for example, it would be conceded that it is a truth of logic that

(4) If all *S* are *M*, and all *M* are *P*, then all *S* are *P*.

But it is not clear that how one can make any sense of (4) without presupposing the notion of a set, which is an abstract object; since by (4), one simply means,

(4\*) For all sets *S*, *M*, *P*: if all *S* are *M* and *M* are *P*, then all *S* are *P*.

However, even though (4\*) is necessary for grasping the content of (4), the extensionalist (nominalist) ontology would not allow such a formulation as (4\*). Again, more importantly, by claiming that a logical formula such as (4) is valid, the very notion of validity can hardly be defined (given that it must be a semantical definition in this context) in extensionalist terms. Because, in saying that a logical form is valid, we presumably mean that it is truth-preserving for all its possible substitution-instances. However, it is simply not possible to prove this by appealing to the (infinite) number of its contingent instances.<sup>52</sup> And this seems to be an additional reason why intensional objects

---

<sup>52</sup> Putnam (1971), pp. 3-13. Similarly, the fundamental character of intensional definition of mathematical truths can be emphasised in some other contexts. Thus for example, the extensional view depends on enumeration of the members of the sets, but it is hard to enumerate all members, if possible at all. It is hard to see how one can enumerate the sets of all extensional instances in the world in order to verify their truth-values. Indeed one can easily see that in view of the fact that human beings are finite it is not possible to enumerate infinite structures, but all this can be expressed in intensional terms simply by affirming the existence of properties -intensional objects- such as the sense expressed by the property of number or mathematical propositions. Thus, as Russell pointed out, "our knowledge in regard to all such collections can only be derived from a definition by intension" that is, "by a property common to all its members and peculiar to them" (1964, p. 168).

are indispensable and modal (logical) and ontological structures are to some extent inseparable.

Yet the naturalist might take a more radical step to challenge the conclusion which has just been drawn. Indeed such a line of thought has been taken by Papineau along with Field's fictionalist (nominalist) view of mathematics. On the fictionalist account, the belief in the mathematical proposition that  $2 + 2 = 4$  is as much true as the belief that 'Oliver Twist lived in London'; "the latter is true only in the sense that it is true *according to a certain well-known story*, and the former is true in that it is true *according to standard mathematics*"<sup>53</sup>. But the fictionalist admits that mathematics is somehow a good story, nevertheless, the goodness of mathematics does not necessitate (or is not sufficient for) its (or necessary) truth. Hence mathematical truths are not conceptually necessary; they are neither necessarily true nor necessarily false; that is, they are either contingently true or contingently false. Accordingly, the contention that mathematical objects are indispensable is not true.<sup>54</sup>

There are many (particularly ontological) important issues to be raised in this connection. It is a question, moreover, whether such a position can be consistently maintained, however I shall not get into that discussion here. Rather, I shall confine the discussion to the question of whether one can do justice to our modal intuitions without at the same time presupposing some kind of intensional objects.

The fictionalist takes a rather conservative attitude towards mathematics (a conclusion that can be drawn from the fictionalist affirmation that mathematics is consistent<sup>55</sup>) which arguably involves certain modal or

---

<sup>53</sup> Field (1989), p. 3.

<sup>54</sup> For such an interesting discussion see Hale (1987), pp. 102-122; Hale and Wright, (1992); Field (1993); and also Hale and Wright (1994).

<sup>55</sup> Field (1989), p. 240.



metalogical notions of *logical consistency* and *logical consequence*. But to say that  $A$  logically implies  $B$  is to say that there are no models in which  $A$  is true and  $B$  is false, and such a semantical definition obviously presupposes abstract objects such as models (sets). Field grants this and similarly the fact that one cannot give syntactical -proof theoretical- definitions of the notion in question without presupposing abstract objects. Therefore he argues that the notion of logical "...implication ...is a primitive notion, just as negation and conjunction and universal quantification are primitive notions".<sup>56</sup>

One might agree with Field in taking the notion of logical implication as primitive, and thus as a logical operator 'LTrue', (for example, ' $A \rightarrow B$ ' to be defined ' $Ltrue(A \supset B)$ ')<sup>57</sup>. But how are we, then, to explain such a notion without presupposing logic? To be sure, to say that  $p$  is 'LTrue' is to say that  $p$  is true in terms of logic alone. But can we understand the idea of being true in terms of logic without immediately being committed to, so to speak, a logical ontology? Essential to Field's argument, it seems, is the idea that logic has no ontology; however, it seems to me that such a supposition is mistaken in that the intensionalist can rightly argue that logic has its own ontology. Accordingly, if there is no reason why " $\rightarrow$ " cannot be taken as a logical constant along with "and", and "or", that is, as an expression whose meaning is a logical object -indeed this seems to be what is essential to intensionalism- then there seems to be no "way out" for the extensionalist to get out of the circle of the intensional (abstract) objects.

In a similar fashion, Papineau<sup>58</sup> has argued that modal judgements are a matter of non-doxastic attitudes, that is, unlike mathematics, our modal (and also moral) attitudes do not have any objects; or rather, they do not have distinctive objects as their references. For suppose that there might be such

---

<sup>56</sup> *Ibid.*, p. 32.

<sup>57</sup> *Ibid.*, p. 34.

<sup>58</sup> (1993), pp. 198-210.

references then, according to Papineau, these should be naturalistically discoverable: "The question whether moral and modal claims involve reference to distinctive objects is once more an empirical issue, a matter of the actual contents of the thoughts of actual individuals".<sup>59</sup> However, paradoxically, Papineau mentions several times that there is another way which might be available to the naturalist to side-step the question of modality, that is, simply by approving "an unqualified commitment to certain forms of argument"<sup>60</sup>.

It seems to me that, first of all, the argument against Field is equally applicable to Papineau's argument that modal judgements are devoid of distinctive references. This view is clearly false if the view that logic has its own ontology is true, and given that such an ontology is intensional, then it is not empirically discoverable. Or else, if the distinctive references of modal judgements are empirically discoverable, then the naturalist owes us an explanation of how this can be carried through. But, as shown, the task to explain how certain things must be true solely on the basis of natural (physical) properties seems to be rather difficult, if not impossible.

As for the second naturalist option, the intensionalist can rightly press the point that the notion of "unqualified forms of argument" needs to be characterised. Might that not be exactly what the intensionalist has in mind as a part of his "intensional" ontology? The answer to this, I think, must be in the affirmative as the very notion of (logical) form in this connection (and whatever it might be) has to be something other than an extensional object.<sup>61</sup>

---

<sup>59</sup> *Ibid.*, p. 206.

<sup>60</sup> *Ibid.*, p. 200.

<sup>61</sup> At this point, as J. J. Katz (*op. cit.*, p. 18) has rightly pointed out the naturalist still must face another "naturalistic fallacy", in addition to the one G. E. Moore pointed out (that naturalism is committed to defining moral concepts) by holding the view that logico-mathematical reality can be naturalised.

If these considerations are correct, therefore, once again, one cannot account for modal notions such as the notion of necessity (therefore, the notion of logical consequence, consistency) on the grounds of the extensionalist ontology alone. Furthermore, this shows that there are good reasons for thinking that modality and intensional ontology are closely connected, and even undetachable; and this is to say that naturalism fails to explain necessary truths.<sup>62</sup>

---

<sup>62</sup> Yet, this should not be taken in any sense as a general defence of intensionalism, for intensionalism (realism of logico-mathematical objects) has its own problems. The foremost trouble for the intensionalist has been generally epistemological, that is, how one can have a causal theory of reference to abstract objects. I shall consider this question in 4.4, where this point will be answered from the "Divine Conceptualist" perspective.



**CHAPTER TWO**  
**CONVENTIONALISM, ANALYTICITY AND NECESSITY**

## 2. CONVENTIONALISM, ANALYTICITY AND NECESSITY

It has been argued in the previous chapter that necessary truths cannot be adequately characterised on the naturalistic view which restricts its ontology merely to physical objects. If the extensionalist attempt to justify the ground of necessary truths in the proposed naturalistic terms results in failure, then the naturalist either must deny that there is such a thing as necessity and therefore necessary truths or leave the question unexplained. In contrast to naturalism, however, realism gives credence to abstract-intensional- objects such as *properties*, *relations* and *propositions*; to each of them, on this account, a distinct sense or *meaning* is attached timelessly and thus independently of their contingent instances; namely, of their extensions.

Conventionalism<sup>1</sup> unlike naturalism, it would seem, can agree with realism that the problem of necessary truths can be dealt with in terms of intensional objects, but cannot agree that (i) intensional objects are *ontologically independent*; and that (ii) they have their meanings *essentially*. Instead, the adherent of conventionalism would say that (i) intensional objects *depend upon our language*; they are basically linguistic entities; hence (ii), as linguistic entities they mean what they mean *contingently*.

### 2.1 The Conventionalist Argument

The conventionalist doctrine of necessity and necessary truths draws basically on the notion of analyticity<sup>2</sup>; what makes a proposition *p* necessary

---

<sup>1</sup> By this, I have "linguistic conventionalism" in mind.

<sup>2</sup> The notion of analyticity, however, is older than linguistic conventionalism. Leibniz seems to have implied that "analyticity" is what makes a proposition necessarily true. He

is the analyticity of  $p$ ; in other words, if  $p$  is necessary, then  $p$  is analytic. Hence,

(C1) For any proposition  $p$ ,  $p$  is necessary if and only if  $p$  is analytic.

---

says "...[if] a truth is necessary, the reason for it can be found by analysis, that is, by resolving it into simpler ideas and truths until the primary ones are reached" (1973a, § 33). However, it is Kant who was the first to give an explicit account of "analyticity" or "analytic truth". According to Kant a proposition is analytic if "the predicate  $B$  belongs to the subject  $A$ , as something which is (covertly) contained in this concept  $A$ "; and synthetic if " $B$  lies outside the concept  $A$ , although it does indeed stand in connection with it" (1929, p. 48). Thus, for example, the proposition "all bodies are extended" is analytic because of the fact that "extension" is tied up with the concept of "body", whereas, this is not the case with the proposition "all bodies are heavy", since "being heavy" is not covertly contained in the concept of "body" and, therefore, it is a synthetic judgement. (*Ibid*, pp. 48-49). Kant thus seems to have thought that a proposition is analytic if and only if its truth can be established only by the means of the principle of contradiction in the sense that "...no predicate contrary of a thing can belong to it"; thus, "*the principle of contradiction must ... be recognised as being the universal and completely sufficient principle of all analytic knowledge*". (*Ibid*, p. 190).

Nevertheless, it would be erroneous to suppose that, according to Kant, all conceptual truths are analytic, for he clearly thought that mathematical propositions, though necessary, are not analytic. So for example, although the mathematical proposition  $7+5 = 12$  at first sight seems to be analytic and thus that it can be deduced solely by means of the principle of contradiction from the concept of a sum of 7 and 5, nonetheless the concept of 12 is by no means already thought of in the sum of 7 and 5. Namely, since it is not necessarily the case that one can find 12 by analysis of the notion 7 and 5, this proposition is not analytic, but synthetic. So, even if we sometimes ought to attach certain predicates to a given concept while this necessity is intrinsic to the very concept, nevertheless, this is not what makes a judgement analytic, for "the question is not what we ought to join in thought to the given concept, but what we actually think in it" (*ibid.*, p. 54). As a result, since mathematical propositions are synthetic (even though they are knowable *a priori*), on this view, there is not an exhaustive coincidence between the set of necessary truths and those of analytic; they have not the same extension.



But what is it to say that  $p$  is analytic? Although the notion of analyticity has been defined in varieties of ways, it would be agreed that the following definition is the most prevalent one<sup>3</sup>:

(A1) A proposition  $p$  is analytic if and only if its truth can be established solely by virtue of the meanings of the words involved.

On the criterion (A1), for example, it would be said that

(1) All husbands are married men

is analytic, therefore necessarily true, due to the fact that the meaning of "married man" follows from the accurate analysis of the meaning of "husband". So, to understand the meaning of "husband" is sufficient for grasping the meaning of "married man", and this, in turn, is sufficient for seeing that it is of necessity that (1) true.

Nevertheless, the core of the conventionalist account of necessity can only be grasped when (C1) and (A1) are taken in conjunction with (C2):

(C2) Meanings are rooted in (linguistic) convention.<sup>4</sup>

Such an account of necessity and necessary truths found its clear exposition in the writings of logical positivists; thus for instance, Ayer argued that necessary propositions

simply record our determination to use words in a certain fashion. We cannot deny them without infringing the conventions which are presupposed by our very denial, and so falling into self-contradiction. This is the sole ground of their necessity. ...It is perfectly conceivable that we should have employed different linguistic conventions... ...that no observation can ever confute the

---

<sup>3</sup> See Ayer (1936), p. 105, and also Swinburne (1975), p. 173.

<sup>4</sup> Thus, in a conventionalist spirit, Quinton argued "that the relevant facts about meaning [a]re the outcome of conventions" (1973, p. 281).

proposition ' $7+5 = 12$ ' depends simply on the fact that the symbolic expression ' $7+5$ ' is synonymous with ' $12$ '.<sup>5</sup>

The conventionalist accordingly maintains that logical truths are to be understood by reference to the conventionally determined meanings of logical words; that is, linguistic (logical) terms such as "and", "or", "if", and so on. Thus, for example<sup>6</sup>, one would see why a logical truth such as " $p \vee \sim p$ " is valid, on the conventionalist view, as soon as she grasps the meaning, therefore, the function of the symbol " $\vee$ ", that is, the logical connective "or" in a language.

Thus, taking logical laws as the syntactical of rules of a language, the conventionalist argues that logical necessity is *not* an external necessitation of pre-existing rules on our thinking but rather an *arbitrary* creation of our own intentions with respect to building our language as Carnap expressly maintained:

*In logic, there are no morals.* Everyone is at liberty to built up his own logic, i.e., his own form of language, as he wishes. All that is required of him is that, if he wishes to discuss it, he must state his methods clearly, and give syntactical rules instead of philosophical arguments<sup>7</sup>.

Now, given that syntactical rules are to be understood as the grammatical rules determining how one should combine the words of a language, logic is thus taken to be equivalent to the formal structure of a language, therefore,

(C3) Linguistic rules = Logical rules.

---

<sup>5</sup> (1936), p. 112.

<sup>6</sup> *Ibid.*, p. 105.

<sup>7</sup> (1937), p. 52.

Logical rules are in that case necessary in the very same sense that linguistic rules are necessary, and given that the necessity of the latter is a matter of convention, so is the former. Hence, the contention that a proposition  $p$  is necessary is to be acknowledged, or makes sense if and only if in saying that  $p$  is necessary one implicitly refers to a given conventionally pre-agreed set of linguistic rules (conventions);  $p$  is necessary relative to  $L$ , where  $L$  can also designate an artificial language. Linguistic rules, in turn, can be characterised in terms of "the logical syntax of a language", that is, "the formal theory of the linguistic forms of that language- the systematic statement of the formal rules which govern it together with the development of the consequences which follow from these rules"<sup>8</sup>.

For (C3), therefore, "logic will become a part of syntax" as "the logical characteristics of sentences (...) and the logical relations between them (...) are solely dependent upon the syntactical structure of the sentences"<sup>9</sup>. Thus, according to Carnap's account, since it is possible to formulate both formation and transformation rules, -which are distinctive of a logical system-, in syntactical terms there remains no obstacle why (C3) cannot be true.<sup>10</sup> That logic is analytic, on the other hand, is to be understood in the same sense that pure syntax is analytic as it deals only with the possible arrangements and combinations of linguistic components.<sup>11</sup>

To sum up, since linguistic rules are contingently as they are, and likewise it is a matter of conceptual necessity that whatever is true by convention must be contingently so -that is, if  $p$  is true on convention  $T_1$ ,  $p$  could have been otherwise on convention  $T_2$  -, it is a natural consequence of the conventionalist theory which identifies logical laws with linguistic rules

---

<sup>8</sup> *Ibid.*, p. 1.

<sup>9</sup> *Ibid.*, pp. 1-2.

<sup>10</sup> *Ibid.*, p. 2.

<sup>11</sup> *Ibid.*, pp. 6-7.



that necessary truths are contingent. In other words, necessary truths owe their necessity to our contingent linguistic practices.

## 2.2 Analyticity examined

Conventionalism, it has been said, proposes "analyticity" as the ground of necessity and necessary truths, where to say  $p$  is necessary is to say  $p$  is analytic; and to say  $p$  is analytic is to say  $p$  is true by virtue of the words involved.

One *prima facie* difficulty is, however, on what basis are we to understand the very notion of analyticity? The definability of "analyticity", as a different question from determining which propositions are analytic, has been seriously challenged<sup>12</sup>, and much of the difficulty seems to consist in the failure to give a precise and non-circular definition of the notion. Yet, the question whether the notion of "analyticity" can satisfactorily be defined would take us beyond the scope of this discussion, rather we shall focus on the issue of whether analyticity can explain the notion of necessity.

To begin with, can we make sense of the notion of analyticity without presupposing "necessity" in the first place? Let us consider the definition of "analyticity" on (A1), according to which, it would be said, (1) is a necessary proposition due to the fact that "married man" necessarily follows from the analysis of the term "husband"; that is, the term "married man" is a part of the meaning of the term "husband", hence they are synonymous.

First of all, it is clear that in order to explain the necessity of (1) in terms of analyticity one implicitly makes reference to the laws of logic, therefore, such a proposition would hold to be analytically true if and only if logical laws -i.e., the logical form underlying the proposition (1)- are valid. Thus, the fact that "husband" and "married man" are synonymous cannot

---

<sup>12</sup> See Quine (1953b), and for a defence of "analyticity", see Grice and Strawson (1956).

suffice to explain why (1) is necessarily true unless the law of identity ( $x = x$ ) is already presupposed.<sup>13</sup> To be sure, if (1) is only one substitution of the underlying *logical form* of a proposition, then what reasons might the conventionalist have for the fact that the law of identity itself is necessarily true?

Moreover, we need to presuppose the notion of necessity in explaining the very idea of "correct analysis".<sup>14</sup> Surely, it might be said that the ground for the analyticity of (1) is that "married man" is a correct analysis of "husband", but "correct analysis" cannot account for just for any proposition to be analytic. For instance, although by "God" is meant "the creator of the universe" the proposition

(2) God is the creator of the universe

is not an analytic proposition because God could have refrained from creating any universe. If so, there seems to be a difference between the correct analysis of "bachelor" and "unmarried man", on one hand, and "God" and "the creator of the universe", on the other. The difference seems to be that while there is a necessary equivalence between "bachelor" and "unmarried man", this fails in the case of "God" and "the creator of the universe". But, one cannot make sense of this difference, hence one cannot differentiate the two senses of correct analysis in question unless one presupposes the notion of necessity.<sup>15</sup> That is to say, in order to explain the difference between these two propositions one has to say that it is *necessarily* the case that if  $x$  is a bachelor then  $x$  is unmarried man, while it is only *contingently* the case that if  $y$  is God then  $y$  is the creator of the universe.

Needless to say, this is also the case in the following definition of analyticity which explains "analyticity" on the grounds of "logical truth":

---

<sup>13</sup> Hamlyn (1967), p. 106.

<sup>14</sup> Adams (1983), p. 45.

<sup>15</sup> *Ibid.*, p. 45.

(A2) A proposition is analytic if and only if its truth can be determined in terms of logical truth.<sup>16</sup>

Similarly, without presupposing the notion of logical necessity, again it seems difficult how one can make sense of,

(A3) A proposition is analytic if and only if its negation implies a contradiction.<sup>17</sup>

On definition (A3), it would be said, for instance, the proposition,

(3) All fathers are male,

is analytic, since its negation

(4) No fathers are male,

implies a contradiction. That is to say, (3) cannot be false (therefore, it is necessarily true). unless its contradictory is true; and since (4) is the negation of (3), it implies a contradiction, and hence it is necessarily false<sup>18</sup>. In more formal terms, this would mean that it cannot be the case that both  $p$  and not- $p$ . If so, however, again it seems that we cannot understand this type of definition without presupposing the law of contradiction, and hence without reference to the logical laws.

Furthermore, granted that *implies a contradiction* means *is necessarily false*, it seems that one cannot understand the key term in this definition, that is, the notion of "contradictoriness", without presupposing the notion of logical necessity. Therefore, I conclude that the notion of necessity is more

---

<sup>16</sup> Frege thought that a proposition  $p$  is analytic if the proof given for  $p$  merely depends upon logical laws or can be reduced to these laws by the help of definitions. See Frege (1950), p. 4, and Quine, (1953b), pp. 22-23.

<sup>17</sup> For such a definition of "analyticity", see Swinburne (1975), pp. 174-175.

<sup>18</sup> Similarly, see Adams, *op. cit.*, p. 43.



fundamental than the notion of analyticity, and if so, the former cannot be understood in reference to the latter.<sup>19</sup>

---

<sup>19</sup> Moreover, there has recently been a considerable discussion on whether 'necessary' and 'analytic' truths have the same extensions. Kant already noted that mathematical propositions are necessary, even though not analytic. However, there seem to be certain non-mathematical propositions which are necessary, but not clearly analytic. Thus, for instance,

(K) Nothing can be (simultaneously) red and green all over,  
is obviously necessary, but is it analytic? Given that (K) implies that, x's being red at *t*1, necessarily rules out x's being green at *t*1 how are we to understand the nature of this entailment in analytic terms? Of course, in order to show that (K) is analytic one might need to show that being "not-green" is a result which naturally stems from the correct or partial analysis of the concept of red. But, given the fact that it is hard to specify the content of colours (which are in general taken to be unanalyzable qualities); and thus that the content of the concept of red cannot be specified in terms of being "not green, not white, not blue, etc.,....", therefore, "not-green" apparently does not seem to be a part of the concept of red. (Pap, 1949, pp. 307-310).

Similarly,

(L) Everything coloured is extended,  
though necessary, does not seem to be analytic. For, on one hand, it is difficult to see that how the property of being "extended" can be seen as a part of correct partial analysis of "coloured", as one can see in the case of "all mothers are female" where "female" is a correct analysis of "mother". On the other hand, it just impossible to separate *being extended* from *being coloured*. (Adams, *op. cit.*, pp. 46-47).

The class of necessary truths thus seems to be broader than that of analytic truths. And in fact this point was already made by Kripke when he contended that

(M) Nixon is a human being  
is a necessary truth. For Kripke, (M) is a necessary proposition just because we cannot imagine a possible world in which Nixon would designate an inanimate object, rather than a human being. Thus, since it is impossible to conceive a counterfactual situation in which Nixon is an inanimate object, say green cheese, "it will be a necessary fact about Nixon that in all possible worlds where he exists at all, he is human or anyway he is not an inanimate object" (1980, p. 46). In Kripke's terminology, the term "Nixon" is a *rigid designator*, because in every possible world it designates the same object. Then, if there are non-analytic necessary truths, the notion of necessity is broader than that of analyticity, the set of necessary truths cannot be equated to that of analytic truths.

### 2.3 Are Meanings Conventional?

It has been noted that the real disagreement between the realist and the conventionalist account of necessary truths is not on the bare contention that their necessity stem from the meanings of the words involved, but on the very nature of meanings.<sup>20</sup> Thus, although the realist might readily endorse the fact that the meanings of the words involved in a proposition *p* are responsible for *p*'s necessity, he can hardly agree with the conventionalist claim that the ground of the meanings itself is conventional.

In contrast to realism, however, conventionalism holds that had we chosen a different set of words involved in a necessary proposition *p*, it would have been false that *p* is necessary. There would remain no obstacle on this criterion why we should not end up with an entirely different class of necessary truths if we decide(d) to do so. But, is it right to claim that "meanings are conventional"?

Of course, it is a matter of contingent use of the words that, for example, we call a "bachelor" an "unmarried man", but is it simply this which makes the proposition

(9) All bachelors are unmarried men

necessarily true? If that is so, then, necessity is obviously verbal. But it seems to me erroneous to think that the necessity of a proposition such as (9) is just verbal, as it stems from the way we use the words "bachelor" and "unmarried man" as synonymous, because it expresses more than what is verbally true of (9). Surely, it states certain facts about *bachelorhood* and *being unmarried* in that there are certain truth conditions required truly to be a bachelor and be an unmarried man. It is perfectly conceivable that we could have chosen a different set of words for the ones we actually have been using. We could have picked out different words for "bachelor" and "unmarried man", but still the

---

<sup>20</sup> See Quinton, *op. cit.*, p. 268.

meaning of the necessary proposition (9) would have been there, though expressed in different words and thus remained unchanged. But if conventionalism is true, on the face of it, one cannot explain how different words in different languages can have common meanings, and also one cannot see any reason why the actual set of necessary truths does not as a matter of fact differ from one natural language to the other; thus, why cannot the same proposition be necessarily true in *L1*, but contingently true or even necessarily false on *L2* and so on?

Similarly, if one takes the thesis that what is responsible for the necessity of a proposition *p* are the meanings of the linguistic terms involved in *p* together with the fact that linguistic entities can change their meaning and thus express other than what they actually express, one seems to be committed to the idea that a sentence which is taken to be analytic can or could have been synthetic, or indeed false<sup>21</sup>. Thus if one supposes for a while that the conventionalist view is true, then it must be perfectly conceivable that just any proposition which we ordinarily take to be necessary could have been chosen as contingent or indeed as necessarily false, and also any contingently true proposition can or could have been taken as necessarily true. Such a possibility, on this view, would have been available to anyone who could have changed the meanings of the words taking place in expressing a proposition. But is this really possible? Can one really make a necessary proposition such as (9) false, or indeed necessarily false simply by changing the meaning of the words involved? The answer to this question can hardly be in the affirmative. For, suppose we have carried out such a task, the real achievement would be to supply a new expression for such a proposition; namely, such an attempt would result in an alteration in the sentence, not in the meaning (or rather, the proposition) of the sentence (9), hence (9) would continue to remain as a necessary truth. Similarly,

---

<sup>21</sup> See Haack (1978), p. 172, 1n.



$$(10) 7 + 5 = 12$$

could have been expressed in different symbols, and in fact, one can put (10) as follows

$$(10^*) VII + V = XII.^{22}$$

But can we say that (10) ceases to be a necessary truth when expressed by (10\*)? Of course not. For what has changed is the verbal expression (the symbols), not the meaning of the proposition. If that is the case, however, it must follow that what seem to be conventional and thus arbitrary are the symbols used in expressing a meaning not the meaning itself as the sense of the proposition is preserved in both (10) and (10\*); therefore, common to both of them.

However, Crispin Wright has argued that it is open to the defender of the conventionalist theory of necessity to maintain that, even though necessary truths are *international* (or rather *interlinguistic*), there is a sense in which necessary truths are still conventional:

Let us suppose then, with the conventionalist, that it *is* conventions concerning 'round', 'square', etc. which generate the necessity that there are no round squares. Since it is necessarily true, it will be a constraint upon the translation of the latter proposition into French, say, both that the result involve an articulation of ingredient vocabulary which appropriately corresponds to 'round', 'square', etc. *and* that it expresses a necessary truth. So - still assuming the correctness of the conventionalist view - the very

---

<sup>22</sup> For similar considerations see Carnap (1956, pp. 56-59). Carnap seems to have granted this point in his later work, *Meaning and Necessity*, where he takes two sentences of different linguistic expressions such as (10) and (10\*) to be *intensionally isomorphic*. For Carnap, to say that two sentences are intensionally isomorphic is to say that they have the same intensional structure, and that is to say, they are L-equivalent. However, as aforementioned, even though Carnap seems to have inclined to intensional semantics, nevertheless, he tries to accommodate such an intuition within the boundaries of an extensionalist ontology considering that intensional (abstract) objects such as properties, numbers, propositions, relations etc., are just instrumental linguistic entities, not abstract objects in the way the realist conceives. (See Carnap, 1956a, pp. 205-221).

feasibility of an adequate translation will depend upon the existence of appropriate conventions governing the use of relevant French vocabulary; otherwise a suitable necessity-expressing French counterpart of the English formulation will not exist. Accordingly there is no need, in order to do justice to the 'international' character of necessary truth, to recognise any necessity which is not generated by convention<sup>23</sup>.

Likewise, granted that even if there could have been alternative (possible) linguistic conventions other than the actual ones (that is, even if the present linguistic conventions are contingent), Wright thinks the conventionalist can argue that we are somehow forced to rely on the actual linguistic conventions as "all hypothetical states of affairs are to be described in accordance with our actual linguistic conventions"<sup>24</sup>. If so, Wright argues, the conventionalist can deny the idea that necessary truths are independent of our linguistic conventions and given that linguistic conventionalism can thus accommodate an international intuition of necessity it would leave out its well-known reductive character<sup>25</sup>.

What Wright's argument can at best show is that meanings -therefore, necessary truths- depend upon linguistic conventions for their expression, but not for their existence nor for their modal properties. Yet the anti-conventionalist opposes the conventionalist idea that meanings are conventional, therefore, that they are contingent and arbitrary rather than their linguistic expressions as he thinks that *meanings are properties with fixed contents* which can be expressed in infinitely many different languages of different expressions and grammars. But then Wright's argument, it seems to me, misses the real conventionalist spirit. Of course, it is correct to think that one cannot convey the meaning of a property such as *square* without

---

<sup>23</sup> Wright (1985), pp. 194-195.

<sup>24</sup> *Ibid.*, p. 192.

<sup>25</sup> *Ibid.*, pp. 190-196.

being involved in certain linguistic conventions, that is, certain linguistic terms such as "four", "side", etc., but what reason might one have for concluding that the very meaning (intension) of such a property, *being-four-equal-sided*, which includes all and only objects which have four equal sides, also depends upon a linguistic convention?

Now, Wright correctly says that an adequate translation of a (necessary) proposition, say, *there are no round squares*, from *L1* into *L2* would "involve an articulation of ingredient vocabulary which appropriately corresponds to 'round', 'square', etc.", but he does *not* explain what seems to be crucially involved in "...appropriately corresponds to...". If what accounts for such an "appropriate correspondence" between different words of two different languages is not the existence of the objective, *linguistic-conventions-independent*, meanings, what else can they be? Or else, why could not just any linguistic expression be in an "appropriate correspondence"? More importantly, given that the primary objective which the conventionalist has is to prove that necessary truths are grounded in our linguistic conventions, he needs to show exactly why a necessary proposition in *L1* cannot be translated into *L2* as a contingent proposition. I cannot see what the conventionalist response to this could be.

Therefore, even if it is true that the feasibility of the translation of a necessary proposition *p* from *L1* into *L2* rests upon the existence of certain linguistic conventions (relevant grammar and vocabulary) in *L1* and *L2*, this is trivial; what is more important is to see that without there being meanings independent of *L1* and *L2*, (i) the very idea of an adequate (or correct) translation does not make any sense and indeed (ii) translation is impossible. Moreover, it is perfectly conceivable that the French sentence (or the counterpart sentence in any natural language) expressing the necessary proposition *there are no round squares* should not have existed as it is a contingent state of affairs. Whereas, such a proposition would be necessarily



true even if there was no such a language as French, that is, it is hardly conceivable that the proposition in question should have ceased to exist or should have been false when it was not expressed in a language such as French or English.

Again, if necessary propositions -or indeed propositions in general- can be expressed in more than one language and each language differs from the other in some important linguistic respects, it would follow that necessary propositions differ from one another with respect to their, so to speak, linguistic properties.<sup>26</sup> The necessary proposition  $p$  would thus have the linguistic property  $F$  when expressed in  $L1$  and the linguistic property  $G$  in  $L2$ . (On the other hand, if a proposition  $p$  can be expressed in more than one  $L$ , it can have different linguistic properties such  $F$ ,  $G$ , etc., in different  $L$ s, and it must follow that it is contingent that  $p$  has  $F$  or  $G$ . But then it looks pretty odd to think that something should depend upon one of its contingent -or relational- properties for its existence as well as modal, and indeed, essential properties.) But if the same necessary proposition  $p$  can have different linguistic properties, sentences such as  $S1$ ,  $S2$ ,  $S3$ , etc., in different languages, how can one legitimately argue that  $p$  depends upon  $S1$  (or on the grammar -the syntactical rules- of such a language) for its existence and modal properties rather than  $S2$ , or indeed any of them, or still all of them?

Now if the conventionalist rejoinder is that necessary propositions depend upon one linguistic convention, then the question is why is the same set of propositions necessarily true in other languages? How can the conventionalist maintain that they are *international*? On the other hand, if

---

<sup>26</sup> By the linguistic properties of a proposition I mean the set of linguistic expressions (words, sentences), grammatical rules etc., of a natural language in which a proposition can be expressed. Thus, for example, the linguistic expressions which one uses in expressing the proposition that "all brothers are male" in English and the counterparts of this sentence conveying the same meaning (proposition) in other natural languages such as French and German would be considered as the linguistic properties of such a proposition.

the conventionalist thinks that they depend upon all languages he needs to show how this can be true; that is, how it can be the case that  $p$  remains true, indeed necessarily true, in different languages with different linguistic conventions (i. e., linguistic expressions, syntactical rules and so on). Still if none of these alternatives is available to Wright, is there another sense in which we might understand the conventionalist claim that necessary truths are conventional?

I do not see any. Wright sees the difficulty and tries to avoid the reductive character of conventionalism by emphasizing the international character of necessary truths in terms of different languages, but, here, he seems to run into a contradiction as he, on the one hand, is inclined to deny that the necessity of necessary truths depend on a particular language and, on the other hand, maintains that the necessity involved is convention-generated. It is hard to see how these two claims can consistently be held together. However, it seems to me, all this shows that Wright's argument suffers from a basic fallacy, that is, jumping from the fact that we cannot express or convey the content of a necessary proposition without expressing it in a given natural language such as English or French to the conclusion that necessity of such a proposition must somehow be dependent upon a particular linguistic convention.<sup>27</sup>

In this connection, one might rightly argue that the difficulty confronting the conventionalist in essence emanates from a nominalistic ontology and therefore it has certain resemblances to what has been labelled the "naturalistic fallacy" in the previous chapter. The difficulty for the ontological extensionalist (naturalist) consists in his identifying intensional

---

<sup>27</sup> It is conspicuous that one of the motivations behind Wright's argument might be his anti-realist disposition and its (later) Wittgensteinian roots, which gives credit only to the manifestation, that is, the assertibility-conditions of a proposition which mediates some sort of linguistic activity rather than its truth-conditions.

objects such as properties (or rather the intensions of properties) with their contingent extensions. Further to this it has been argued that this cannot be the case. Thus, it has been argued, for example, that one cannot naturalize the meaning of a property such as "man" either by identifying with one of the actual instances of that property -an actual man- or with set of all its instances -the set of all men. The objection, in a word, therefore, was that such a property has its extension contingently but has its intension essentially. Similar considerations apply to conventionalism as it identifies the meaning of a property, so to speak, with its contingent linguistic extensions; that is, with the verbal expressions in a language, which stands for non-linguistic properties. It is interesting that there is a resemblance between Wright's international conventionalist and an extensionalist possible world semanticist such as David Lewis who identifies intensional objects with their, so to say, inter-possible-worlds extensions.

As a result, one thing seems to be importantly missing from the conventionalist picture of necessity and necessary truths: it overlooks the fact that the identity relation obtaining between a property or a proposition and the meaning which one attaches to such intensional entities is necessary, whereas the counterpart relation holding between linguistic entities and the meanings conveyed by them is contingent. What seems to be conventional is what we adopt in the linguistic realm such as words and sentences by which we express the meanings of the intensional entities such as properties and propositions; and what does not seem to be conventional is the domain of meanings which can be or could have been expressed by different linguistic expressions. Then, one's freedom to change comes in the linguistic realm (in the realm of words, sentences), not in the logical realm (the realm of properties and propositions). But such a change in itself is clearly trivial.

There seems to be, however, a further difficulty with analytic accounts -even with non-reductive ones- of necessary truths in general: how can the



meaning of the words involved in a proposition  $p$  be so connected to each other that it makes  $p$  not only true, but *necessarily* true? One possible linguistic conventionalist explanation for this might be that a statement  $p$ 's being necessary is not only a matter of the meanings of the words involved in  $p$ , it is also due to the fact that the words in  $p$  stand in such and such relations to one another.<sup>28</sup> But still, it seems to me that this too is far from being satisfactory in explaining why a proposition *must* be true. If what makes a proposition  $p$  necessary are the connections or interconnections of the meaning of the words involved in  $p$ , plus the syntactical relations obtaining among words in  $p$ , there seems to be no reason why just any statement cannot be considered necessary. Thus, let us consider, once again, a proposition such as (1), that is, "all bachelors are unmarried men" and compare it with (2); "God is the creator of the universe". Why do the meaning of words involved in (1) suffice to secure its necessary truth while this is not equally true in the case of (2)? Certainly, since we understand "the creator of the universe" as soon as we understand the term "God", what reason might the conventionalist have for denying the analyticity, hence the necessity of (2)?

In reply, it might be said that the relation obtaining among words in (1), is not the same as in (2); that is to say, while the identity relation between the concept of "bachelor" and "unmarried men" is necessary, the same relation between the concept of "God" and "the creator of the universe" is contingent as God could have refrained from creating any universe at all. Indeed this is true, but I cannot see how this can be explained solely on the conventionalist grounds; on the grounds of the meanings of the words and their syntactical relations alone.

---

<sup>28</sup> See, for example, E. J. Craig (1975), p. 7.

## 2.4 Linguistic Rules and Logical Truths

Now, if on the conventionalist view, the modal property of a proposition is a matter of convention and if also whatever is true by convention could have been otherwise, it is a natural consequence of such a view that necessity is a matter of contingency. There seems to be no reason why one cannot take just any proposition as necessary; why radically different conventions with entirely different sets of necessary propositions cannot or could not have been produced instead. For, on this account, logic itself is considered to be conventional; grounded in language in terms of syntactical characterisation of the basic terms. It is up to us to choose the linguistic convention in which the syntactical rules, hence logic, are embedded. Such a view surely presupposes that there do not exist beforehand any logical constraints either to force us to adopt one convention rather than the other, or to form the scope and the limits of our convention. Nor is there a common ground on which all possible conventions somehow must rest. Hence, *logic is arbitrary* in the sense that logical necessity is at best seen as an entailment internal to a convention and thus ultimately traceable to certain self-restrictions. In a word, therefore, logical necessity is not what the realist takes it to be: an objective source of compulsion upon us, but is rather our own intentional confinements on our own language.

But is it really conceivable that we can or could have adopted just any proposition to be necessary or contingent? Is it conceivable that we can or could have chosen a radically different convention instead, in which, for instance, the very law of contradiction is, as a result of the adopted linguistic fashion, false, and instead, however, the negation of such a law is necessarily true?

Certainly it is a part of the conventionalist view that there are alternatives to the actual set of necessary truths; however, the question is

whether the conventionalist can show us how this is indeed possible. To start with can one, for example, consistently maintain that the law of contradiction is false? To be sure, if to say that it is false is to say it is not true, then in denying, that is, in saying that the law of contradiction is false, one seems to be already committed to the very thing one is trying to deny. In this sense, the law of contradiction is often argued to be so central to our thinking that we cannot consistently deny it as our denial presupposes such a law and thus affirms its validity<sup>29</sup>. Precisely, this is what Aristotle<sup>30</sup> tried to show when he said that the law of contradiction is the most fundamental of all principles, hence that it is impossible to think that an object can have the property *F* and not-*F* simultaneously and in the same respect.

So, it looks unquestionably true that there is a minimal requirement for there being intelligible discourse in that such discourse must not breach the law of contradiction on pain of being inconsistent; for, it is not possible to make sense of a convention in which any proposition *p* is true together with its negation not-*p*. But can there not be a sense in which it might be thought that the law of contradiction is still conventional? What if we exchange the meaning of "not" for "either identical with or different from"?<sup>31</sup> Would not then the law of contradiction be violated, and yet the discourse involving a contradiction, *p* and not-*p*, be plainly intelligible? Of course not. For, in so doing, what is changed is not the logic, the law of contradiction, but the language in which it is expressed. Yes, not-*p* would not then be the contradictory of *p*, but the meaning of "not" as it occurs in "*p* and not-*p*" would be preserved; this remains unchanged even though it can be expressed in

---

<sup>29</sup> Blanshard (1962), p. 276.

<sup>30</sup> (1941a) 1005b18-20.

<sup>31</sup> Campbell (1958), p. 76.



different terms<sup>32</sup>. If so, once again, it seems that what can be changed is not the meaning of a necessary proposition but the linguistic expression of it.

The defender of conventionalism might grant the fact that the law of contradiction is inevitable for there being an intelligible convention, yet, nonetheless maintain that such a principle is conventional in the sense that it is necessary only if we decide to use a language, "but to speak a language is still a choice and the law of contradiction still a convention".<sup>33</sup> But such a view is clearly erroneous, since it presupposes the fallacious linguistic conventionalist assumption that the law of contradiction can only be a linguistic rule, and nothing else. Surely one uses logic in formulating an intelligible language. However, the very idea of intelligibility presupposes logic, -e.g. the law of contradiction- and this is not a matter of language, but of thought. In this sense it is evident that *thought precedes language*. It is perfectly conceivable that we should think in accordance with the laws of thought but fail to express what we think, that is, we do not stop using logic when we keep silent. Consequently, what is conventional, -what we can make decisions about- then, is not the law of contradiction itself but whether we should speak a language or not; but this does not bear too much relevance to question of whether or not that the law of contradiction is true by convention.

Provided that we cannot conceive how a contradiction ( $p \ \& \ \text{not-}p$ ) can be true or rather how the negation of such a law can function as the basic law of a convention, then there would be at least one necessary truth which is indispensable for there to be any intelligible convention, and therefore not true by convention. In this case, the linguistic conventionalist thesis that logic is freely and arbitrarily chosen would only be true for some necessary truths, not for all them; but then, such a thesis would be contradictory in the

---

<sup>32</sup> *Ibid.*, p. 76.

<sup>33</sup> Quinton, *op. cit.*, p. 273.

sense that it holds "all necessary truths are conventional" and also "some necessary truths are not conventional"<sup>34</sup>.

The conventionalist considers logical laws to be the consequences of purely syntactical terms which are defined implicitly<sup>35</sup>; namely, of the function of logical words such as "and", "if", "or", "not", and so on. That logical laws are true by convention, therefore analytic, is thus understood in the sense that the meaning of these terms, which are conventionally agreed, determines their truth. The arbitrariness or contingency of logical laws, on the conventionalist grounds, would thus be maintained to the extent that it is up to us to change the meanings that we attach to these terms.

Thus, according to conventionalism, one can introduce some primitive logical terms, whose function is to produce the conventions, where the meaning to be attached to these purely formal (syntactical) entities is not determined beforehand; they are initially meaningless<sup>36</sup>. Indeed, this fact is supposed to provide the linguistic conventionalist with the freedom to do otherwise in the field of logic. But, it remains obscure on this picture how can one set out to adopt a convention which is supposed to account for the existence of logic without presupposing some logical truths in the first place (i.e., without the meanings of the proposed set of logical primitives already being present to him); therefore, it seems that we cannot introduce the primitives in question to explain the truth of the statements in which the primitives occur essentially unless we already presuppose or know the meanings of the very primitives which we are trying to explain<sup>37</sup>. Thus, in order to establish a linguistic convention obviously one needs to formulate the

---

<sup>34</sup> Blanshard (1962), p. 275.

<sup>35</sup> The notion of "implicit definition" itself is far from being clear, thus it is hard to distinguish on these grounds logical terms from non-logical ones. See Swinburne (1975), pp. 172-173.

<sup>36</sup> Quine (1935), p. 90.

<sup>37</sup> *Ibid.*, p. 104.

syntactical structure of a language, and in order to formulate this structure one needs to use a language, and it seems just impossible to envisage how one can use a language without presupposing logic. Accordingly, the conventionalist thesis which has been designed to account for the existence of logic is clearly circular in that it needs logic for its own invention. Clearly, since logic precedes any possible linguistic convention, to say that logic is true by convention would be equivalent to the circular thesis that logic is true by logic.<sup>38</sup> Consequently, that logic is *prior to* inventing any possible convention makes it false that logic is true by convention and hence that one is free to built up one's own logic.

Furthermore, if we follow the conventionalist criterion of analyticity of logical constanhood, that is, if the meaning of a logical constant can arbitrarily be fixed *via* certain conventional rules, then there is no reason for excluding just any connective. But can we really introduce just any connective? Thus, following Prior, suppose we introduce the contradictory connective "tonk" whose meaning is determined "by the rules that (i) from any statement P we can infer any statement Q [P-tonk-Q] by 'tonk' (...) and that (ii) from any 'contonktive' statement P-tonk-Q we can infer the contained statement Q"<sup>39</sup>. Following "tonk" rules, for example, one can infer ' $2 + 2 = 5$ ', in an analytically valid way, from ' $2 + 2 = 4$ ' as follows:

$$2 + 2 = 4$$

Therefore,  $2 + 2 = 4$  tonk  $2 + 2 = 5$

Therefore,  $2 + 2 = 5$ .<sup>40</sup>

Consequently, given that a logical connective such as "tonk" leads us to absurd consequences, it should have been evident that the conventionalist contention that one can introduce any connective as a logical constant, and on

---

<sup>38</sup> See Putnam (1983c), pp. 172-173.

<sup>39</sup> Prior (1960), p. 218.

<sup>40</sup> *Ibid.*, p. 218.



these grounds that logical truths are conventional in arbitrary terms of syntactical characterisation is false.<sup>41</sup>

There are some further problems with the conventionalist account of logic. Thus, as Quine argued, there is a circularity of the conventional theory of logical truth. Granted that the conventionalist thesis of "laying down convention" is to be considered in the same way that postulates are understood in an axiomatic system, -that is, the rules which are adopted by convention are generative rather than transformative-, Quine argued that one needs logic in order to infer an individual logical truth from a general convention.<sup>42</sup> For a convention is general in the sense that it lays down the rules for infinitely many statements agreeing with the description fixed by convention, but the "derivation of the truth of any specific statement from the general convention thus requires a logical inference, and this involves us in an infinite regress"<sup>43</sup>. Thus for example, let us take "if" and "then" idioms as primitives and thus lay down the general convention, (if  $p$  then  $q$ , &  $p$ , then  $q$ ) where any substitution for such a convention produces a truth. But then the very truth that the truth of the individual logical truth (the substitution of the general convention, that is, if  $p$  then  $q$ , &  $p$ , then  $q$ ) follows from the general convention, if  $p$  then  $q$ , &  $p$ , then  $q$ , itself turns out to be a logical truth. Yet,

---

<sup>41</sup> The concept of logical constanhood is rather controversial, but what concerns us here is whether one can provide an arbitrary logical constant along conventionalist lines, which usually requires a merely syntactic definition of such a notion rather than a semantic definition. However, a semantic definition involves some unwelcome prerequisite considerations to the conventionalist such as the conservativeness towards "truth", "truth-preserving", "validity", etc. Yet it is difficult to see how one can, in giving a definition of a logical constant, dispense with these semantic requirements, and therefore be able to give a purely syntactic definition of a logical connective. For a recent debate on this issue, see Peacocke (1976); and Hacking (1979), pp. 299-300.

<sup>42</sup> Quine (1935), pp. 88-105.

<sup>43</sup> *Ibid.*, p. 103.

such a truth itself, on the conventionalist account, remains unexplained<sup>44</sup>. Consequently, "if logic is to proceed *mediately* from conventions, logic is needed for inferring logic from the conventions"<sup>45</sup>.

In addition, given that the conventionalist argument basically aims at explaining the ground of necessity in terms of linguistic rules and thus makes it a matter of contingency and intentional settlement, it faces a further difficulty. For, given that not *all* necessary statements are direct registers of the adopted conventions but rather that some of them are more or less remote consequences of these conventions, linguistic conventionalism seems unable to explain how certain conventions have certain consequences<sup>46</sup>. That is to say, provided that certain conventions are adopted by direct registration of the axioms together with rules of inference, the linguistic conventionalist cannot explain why one *must* adhere to the conventions embodied in the theorem, and "this necessity must be one imposed upon us, one that we meet with"<sup>47</sup>, not one we have arbitrarily adopted.

To conclude then, one might rightly say that the conventionalist characterisation of logical truth and necessity in terms of linguistic rules can hardly do justice to our *logical truth* and *necessity* intuitions in that logic is clearly much more fundamental than any linguistic convention. Indeed, logical truths, far from being grounded in a linguistic convention, on the contrary, seem to set the limits of any possible linguistic convention, of any intelligible discourse; and in this sense, their truth is external to us and thus not a matter of an arbitrary linguistic invention. If anything can be truly said

---

<sup>44</sup> See *ibid.*, pp. 103-104, and also Stroud (1981), p. 243.

<sup>45</sup> Quine (1935), p. 104.

<sup>46</sup> Dummett (1959b), p. 170. Thus, for instance, on the conventionalist view, "Nothing can be both green and red" is not a direct register of a convention, rather it is a necessary consequence which follows from the meanings of "green" and "red" displayed in the ostensive training. (*Ibid.*, p. 169.)

<sup>47</sup> *Ibid.*, p. 170.

concerning the relation between a linguistic convention and logic at all, it is that logic is the essence of all possible conventions; therefore, a convention is possible as far as it obeys the rules of logic.



**CHAPTER THREE**  
**WITTGENSTEIN, RULES AND NECESSITY**

### 3. WITTGENSTEIN, RULES AND NECESSITY

In this chapter, I shall conduct a critical examination of the Wittgensteinian argument that necessary truths -the truths of logic and mathematics- can be explained on the basis of the analogy of the rules of a language-game, bearing in mind the question whether such an account can help us to understand the contention that necessity is somehow conventional.

#### 3.1 Radical Conventionalism

Wittgenstein's account of necessity, one might rightly argue, is conventionalist in spirit<sup>1</sup>. The necessity of logical principles, on this view, can be accounted for in terms of "rules of grammar" or "rules of the language-game":

The rules of logical inference are the rules of the *language game*.<sup>2</sup>

Thus,

Logical inference is part of a language-game<sup>3</sup>.

---

<sup>1</sup> Wittgenstein's views on the issue in hand have been subject to different textual exegeses and this has somehow raised the controversy of what is his real position. However, one thing is clear, that is, he favoured a non-realist view of logical necessity as he tried to explain the ground of necessity in terms of contingent-natural (or cultural) facts.

<sup>2</sup> (1956), V, § 28.

<sup>3</sup> (1956), V, § 23.

However the rules of the language game are not *essentially* as they are, but arbitrary:

The only correlate in language to an intrinsic necessity is an arbitrary rule. It is the only thing which one can milk out of this intrinsic necessity into a proposition<sup>4</sup>.

The notion of *following a rule* plays a central role in Wittgenstein's understanding of logical necessity; hence agreement to following the rules of a game is what makes something logically necessary for us. Still, this does not mean that one is necessitated to follow the rule. So, for instance, Wittgenstein suggests that we consider the case of a pupil who has been instructed to write down the series of numbers formed by adding according to the rule "+2". What if that person follows this instruction up to 1000, namely by writing ...996, 998, 1000, and then when he has been asked to continue he writes down 1004, 1008,...? Faced with such case, according to Wittgenstein, we should say "it comes natural to this person to understand our order with our explanations as we should understand the order: 'Add 2 up to 1000, 4 up to 2000, 6 up to 3000 and so on'"<sup>5</sup>.

Similarly, Wittgenstein gives some other examples to convince us that our way of inferring, calculating and counting is not the only possible one. For instance, he argues that it is not logically impossible to come across a group of people who sell wood at a price proportionate to the area covered by the piles regardless of their height. Furthermore, it is even conceivable that they would say "Of course, if you buy more timber, you must pay more!"<sup>6</sup>. Faced with such a case, in Wittgenstein's view, "we should presumably say ... they

---

<sup>4</sup> (1953), § 372.

<sup>5</sup> *Ibid.*, § 185.

<sup>6</sup> Wittgenstein (1956), I, § 194.



simply do not mean the same by "a lot of wood" and "a little wood" as we do; and they have a quite different system of payment from us"<sup>7</sup>.

By these examples, what Wittgenstein is basically trying to do, one might say, is to undermine the very ground of the realist understanding of logical necessity, the *must* of logic, as he disputes the very grounds of logical compulsion:

"But am I not compelled, then to go the way I do in a chain of inferences?" -Compelled? After all I can presumably go as I choose!-"But if you want to remain in accord with the rules you *must* go this way."-Not at all, I call *this* 'accord'.-"Then you have changed the meaning of the word 'accord', or the meaning of the rule."- No; -who says what 'change' and 'remaining the same' mean here?

However many rules you give me - I give a rule which justifies *my* employment of your rules.

'But you surely can't suddenly make a different application of the law now!'... But if I simply reply: 'Different?-But this surely isn't different!' -what will you do? That is: somebody may reply like a rational person and yet not be playing our game.<sup>8</sup>

On linguistic conventionalism, it has been said, although logical laws are conventional and thus freely and arbitrarily adopted, nevertheless, one is not free not to accept what follows from the pre-agreed set of conventions *via* the pre-agreed rules of inference. In other words, once certain conventions are adopted in the first place, one must welcome the consequences which necessarily follow from them. In fact, this is a problem for linguistic conventionalism in that it cannot account for the necessary relations taking place among conventions in its own (linguistic conventionalist) terms; for this being the case, there would be non-conventional necessities that one faces in the conventionalist theory. Therefore, if the conventionalist picture

---

<sup>7</sup> *Ibid.*, I, § 150.

<sup>8</sup> *Ibid.*, I, §§ 113-115.

of necessity is to be complete, it must also explain how these very relations themselves are to be conceived as the results of the adopted conventions<sup>9</sup>.

However, it is clear from what Wittgenstein argues above that one is free even within the rules of a game at any stage to make an arbitrary decision regardless of what we ordinarily consider to follow necessarily from what is granted in the first place. No matter what is admitted as a common agreement, this by no means necessitates someone to accept the consequences which follow. Clearly, this is not just to say that logical rules are ultimately grounded in the arbitrarily laid down rules of a language-game, hence that they are equally arbitrary, but also it means that there is not such a thing as, so to say, "internal necessitation" in a language-game.

Given these considerations, however, Dummett seems to be right in designating the Wittgensteinian position as full-blooded (or radical) conventionalism, according to which, "the logical necessity of a statement is always the direct expression of a linguistic convention. That a given statement is necessary consists in our having expressly decided to treat that very statement as unassailable"<sup>10</sup>, which gives us at each step of a proof the possibility of a free choice "to accept or reject the proof; there is nothing in our formulation of the axioms and of the rules of inference, ...and hence nothing which *forces* us to accept the proof"<sup>11</sup>. Accordingly, since, on this view, unlike linguistic conventionalism, each necessary proposition is separately taken to be conventional, one is not bound to the logical relations, therefore necessities, taking place between conventions and their consequences.

To strengthen such a radical position Wittgenstein puts forward two basic doctrines. Thus, first, according to Wittgenstein, *logic is antecedent to*

---

<sup>9</sup> See Dummett (1959b), p. 170; and also Wright, (1980), p. 392.

<sup>10</sup> Dummett *ibid.*, p. 170.

<sup>11</sup> *Ibid.*, p. 171.

truth<sup>12</sup> in the sense that in an argument only logical inferences are not brought into question, but this does not show that they correspond to truth; "there is, so to speak, no 'independent reality' to which valid inference, correct calculation, etc. are subservient"<sup>13</sup>. Since there is not any further reality than logical inference itself providing the criterion for truth<sup>14</sup>, logical rules are, so to say, *groundless*.

Secondly, Wittgenstein holds a radically sceptical attitude towards the idea that there is a determinate sense to be attached to an expression such that in understanding an expression one grasps a fixed meaning which is *prima facie* needed for the correct application of an expression<sup>15</sup>. Thus, the Wittgensteinian theory of meaning seems to be truly anti-essentialist in that "the meaning of a word is its use in the language"<sup>16</sup> rather than an *a priori* property which extends itself according to its content; therefore, the meaning of an expression has, so to speak, an open-ended character. And in fact it has been argued<sup>17</sup> that this is where Wittgenstein's radical conventionalism resides. Thus, at the heart of the Wittgensteinian critique of logical necessity is the idea that "there is in our understanding of a concept no rigid, advance determination of what is it to count as its correct application"<sup>18</sup>, which is the denial of the realist conception of the pre-existence of the patterns with pre-determinate truth-conditions. And since there is not a fixed meaning of an expression, there cannot be such a thing as the correct or incorrect application of such an expression, thus one cannot make sense of what it is "to

---

<sup>12</sup> Wittgenstein (1956), I, § 56.

<sup>13</sup> Wright (1980), p. 74.

<sup>14</sup> *Ibid.*, pp. 73-74.

<sup>15</sup> This is at least true how both Wright (1980) and Kripke (1982) interpret Wittgenstein's work on this issue.

<sup>16</sup> Wittgenstein (1953), I, § 43.

<sup>17</sup> See Wright (1980), p. 392.

<sup>18</sup> *Ibid.*, p. 21.



do the same thing again" or "to follow the same rule". But given that there is not an advance determination of what one means by an expression, by the same fact, there cannot be a determinate future use or application of an expression.<sup>19</sup> The problem, in a word, as Wittgenstein himself pointed out, is that in following a rule -or in fixing a meaning for an expression in general- nobody can determine what "change" and "remaining the same" mean with respect to following the rule in question. If so, however, there would be no difference between correct or incorrect application of an expression; in fact such a distinction would be irrelevant to this account. And this naturally leaves the door open to countless different uses or applications of an expression and thus following a rule.<sup>20</sup>

To apply these remarks to the Wittgensteinian deviant pupil of mathematics, since no one can possibly establish an objective sense of following the command "+2" - for "change" and "remaining the same" cannot be decided objectively; the rule needs the approval of, so to say, the follower of the rule at every single step; no matter whatever course of *application* is taken, this can be made both to accord and also conflict with the rule.

Having this background in mind, it becomes easier to understand why Wittgenstein thinks that it cannot be a matter of compulsion that one accepts

---

<sup>19</sup> *Ibid.*, p. 21.

<sup>20</sup> The roots of such a sceptical attitude, or the so-called Wittgensteinian paradox of rule-following, Kripke has pointed out (1982, p. 7), are to be viewed in the following passage of *Philosophical Investigations*, § 201:

This was our paradox: no course of action could be determined by a rule, because every course of action can be made out to accord with the rule. The answer was: if everything can be made out to accord with the rule, then it can also be made out to conflict with. And so there would be neither accord nor conflict here.

The sceptical paradox, in Kripke's formulation, is that "there is no fact about me that distinguishes between my meaning a definite function by 'plus' (which determines my responses in new cases) and my meaning nothing at all" (1982, p. 21).

the proof. Inasmuch as "our concepts cannot remain unchanged at the end of the proof. ...we could have rejected the proof without doing any more violence to our concepts than is done by accepting it"<sup>21</sup>. In other words, then, a proof basically is a result of the change of our concepts, it "is a new paradigm",<sup>22</sup> and in this sense, there is an element of decision<sup>23</sup> in accepting or rejecting it. Thus, the locus of Wittgenstein's argument, in Wright's formulation, is that

[the] conception of necessity involves thinking of necessary statements as comparable to the rules of... a game. They are, so to speak, among the rules for the game of language-use; they supply criteria for the description of circumstances and the correct implementation of procedures. (...) In terms of our game analogy, allied to the rule-following considerations, we can now model three respects in which necessity may be described -...-as on Wittgenstein's view conventional. It is, to begin with, conventional what rules go into the rule-book; we are laying down an activity, and are subject to no external constraints. ... Secondly, it is an open question what is proper application of the rules in any particular case; it is a matter of successive judgements. ...And finally, ..., it is an open question to what other conventions we are committed by the acceptance of certain rules, of certain statements as necessary.<sup>24</sup>

So much for the essentials of the Wittgensteinian argument. Obviously, what is distinctive about such an argument is that it leaves no room for such a thing as "objectivity" in the realm of meanings and consequently in the logico-mathematical reality. And this being the case, the Wittgensteinian position stands in a sharp contrast to the realist view of both *meaning* and *logical necessity*.

---

<sup>21</sup> Dummett (1959b), p. 173.

<sup>22</sup> Wittgenstein (1956), II, § 41.

<sup>23</sup> See Wright (1980), p. 41.

<sup>24</sup> *Ibid.*, pp. 231-232.

We have seen that the realist takes properties to have intensions as well as extensions; the intension of a property *F* is the meaning of *F* -the content of the concept of *F* - whereas the extension of *F* is those instances which fall under the description given by the intension of *F*. Thus, for example, suppose *G* is the property of being alive, the intension *G* would be *being a living organism* and the extension of *G* would be the set all actual objects which satisfy such a description, that is, *any object which has a living organism*. So, if one knows or understands the intension of *G*, thereupon he would be able to know which objects are to be taken as the extension of *G*, namely, he would have the ability to recognise which objects are to be called *alive*. To say that the intension of *F* determines the extension of *F* is then to say that the meaning -sense- of *F* determines what kind of actual objects can be classified under *F*. Given the intension of *F*, then, there are determinate ways for applying -predicating- *F* to each individual case; whether it is *F* or not-*F*.

Applied to the realist view of logico-mathematical necessity, this picture would yield certain logico-mathematical patterns determined by the meanings of the logico-mathematical properties. Thus the grasp of the meaning -intension- of a property secures one's correct application of such an abstract object to the individual cases, and in this sense, necessary truths and the necessity obtaining among propositions -logical consequence- is objective as well as recognitional. Thus, to follow the right logical steps in an argument is to follow, so to speak, already existing patterns which provide pre-determinate truth-conditions of each step of the argument. There is an advance determination of what is a valid inference or a correct application of a logico-mathematical rule and thus under what circumstances a logical or mathematical statement is to be true or false. In fact this is usually considered to be what it is to know the meaning of a term or a proposition on the realist account.<sup>25</sup>

---

<sup>25</sup> See Wright (1980), pp. 3-20; and also Frege (1956) *passim*; Dummett (1959b), p. 167.



Wittgenstein, as seen, clearly repudiates such an account of meaning, but instead, extraordinarily enough, he leaves us with virtually no meaning. But is such a view really tenable?

There seems to be, in the first place, some *a priori* problems with the Wittgensteinian argument in that if the foregoing sceptical considerations are right, it can be neither true nor false of any linguistic expression, any word *w*, or any statement *S*, that *w* or *S* has a determinate meaning; and this seems to entail some sort of global non-factualism (irrealism) of meaning. This being the case, however, if, for any sentence *S* in a language, *S* has no determinate meaning, the very *S* expressing the sceptical thesis cannot possibly have a determinate meaning. But, then, such a thesis is inevitably self-referentially incoherent<sup>26</sup>.

Apart from this, let us suppose that terms lack intension, then how are we to know when such a term is correctly or incorrectly used? Or indeed, can we use it at all? After all, if there is not such a thing as the intension of a term, there remains an empty sign or symbol, and this being the case, there seems to be no way to see how a term can be used and thus applied to its extensions; that is, to the range of individual cases to which it applies. However, let us suppose for a while that there are no "intensions", again, as Blackburn points out<sup>27</sup>, there must be something -no matter what this fact can be- in virtue of which we might sensibly speak of a term's being used correctly or incorrectly on the grounds of the *prima facie* fact that there is such a distinction in our

---

<sup>26</sup> See Boghossian (1989), p. 523. By the same token, the incoherence of irrealism or global non-factualism about meaning and truth is evident, since such a view itself seems to presuppose a realist (or robust) notion of truth in that the non-factualist denial of a truth-conditional theory of meaning and truth presupposes a truth-conditional theory and therefore it treats "truth" as a real property. For such an argument see Boghossian (1990), pp. 157-184; and for a defence in minimalist terms, see Wright (1992), pp. 231-236.

<sup>27</sup> (1984b), p. 281.

language. Then, the question is what else can be responsible for fixing the meaning of a term and thus its correct-use conditions, if not the realist "intensions"?

The prevailing Wittgensteinian rejoinder to this question is that it is the communal agreement -communal dispositions- which determines what is the correct or incorrect use of a term by an individual.<sup>28</sup> To be sure, it is possible for the community to decide whether an individual is using a term in accord with the communal agreement, but then the question becomes how and against which criterion the community itself is able to determine whether the individual is on the right track? Clearly unless the intension of a property is available to the community there seems to be no way to see how the community itself can perform the proposed task. And even worse, without such an intension -meaning- it is difficult to see how the very notion of "the communal agreement" can be understood, or indeed how such a fact might come into existence.<sup>29</sup> The difficulty with the communitarian account, in Boghossian's words, is "that we are still lacking what communitarianism was supposed to provide: the specification of a property *M* such that, possession of *M* by a disposition is necessary and sufficient for that disposition's correctness"<sup>30</sup>. If so, however, the Wittgensteinian argument of meaning in terms of communal agreement seems to fail to resolve the problem.

On the other hand, surely one's manifestation of his understanding of a term by using it correctly to the satisfaction of the community is a fact which comes about in a community, but what reasons can be provided for supposing that the *meaning* of a term itself is somehow identical with the use of that

---

<sup>28</sup> Wright (1980), pp. 219-220.

<sup>29</sup> Of course, it might be argued that the intension of a property -meaning- itself is something which results out of a communal agreement, but this takes us back to the linguistic conventionalist argument that meanings are conventional, which has already been considered to be untenable.

<sup>30</sup> (1989), p. 536.

term? On the face of it, a manifestation must be a manifestation of *something*, and likewise, a "use" must be according to *something*. And this *something*, it seems to me, is precisely what the realist is looking for.<sup>31</sup>

Consequently, I do not see how there can be a fact determining the meaning of an expression other than the one proposed by the realist, that is, an *intensional content* which determines the meaning of an expression.<sup>32</sup> If so, what is wrong with Wittgenstein's deviant pupil in performing the command "+2" in the way described is that he fails to grasp the meaning -intension- of the expression "+2" which does not exist in the Wittgensteinian picture of meaning. What is *missing* in the so-called the Wittgensteinian paradox of rule-following, accordingly, is the *meaning* of the term itself,<sup>33</sup> and to be sure, there seem to be good reasons for thinking that it is the absence of the meaning of the expression in question which yields the possibility of a deviant way of following the command, while, by contrast, it would be the presence of such an abstract object, provided that there being no mistake or misunderstanding, which can secure the correct application.

By the same token, once the meanings of terms and thus statements are assured, there seems to be no way to give credence to someone who agrees with us on the premises that

(1) All men are mortal,

and

(2) Socrates is a man,

---

<sup>31</sup> In this connection, it would be right to consider that the Wittgensteinian theory of meaning is also extensionalist in the sense that it identifies meaning with the way it (the meaning, or intension of a term) extends itself in use and manifestation.

<sup>32</sup> There are a number of approaches other than realism to meet such a requirement, which I shall not consider here, but for an excellent critical examination of these views, see Boghossian (1989).

<sup>33</sup> See Katz (1990), p. 161.



but nevertheless disagrees with us on the conclusion which necessarily follows from (1) and (2), that is,

(3) Socrates is mortal.

That is to say, once we agreed on the premises and the rules of inferences, with Dummett we might say, "when the proof is shown us, we are mere spectators. ...we do not know what it would be like for someone, who by ordinary criteria, already understood the concepts employed, to reject the proof"<sup>34</sup>.

What next of the central idea of the Wittgensteinian argument that logical laws can be seen as the rules of a language-game? But what is a game, how are we to define it? Can there be radically different language-games with entirely different sets of rules, that is, logical laws, than ours? If the answer is "yes", how do we know them, if they are knowable at all?

In order to make a justified claim for even the (possible) existence of radically different language-games, it seems to me, there *must* be something *common* to all language-games of which we can speak; or else, there seems to be no way to know even that there are different language-games than ours. However, it might be argued, there is a well-known Wittgensteinian doctrine of "family resemblances" which exactly aims to show that *nothing is common to language-games* but "the various resemblances between members of a family: build, features, colours of eyes, gait, temperament, etc. etc. overlap and criss-cross in the same way."<sup>35</sup>

It is, to be sure, a matter of an independent discussion whether the Wittgensteinian doctrine of "family resemblances" can be defended in general, or, whether it can solve the problem of universals etc., but this is not our question. What concerns us here is rather to see whether such a doctrine can help us to understand the idea that the logical rules are the rules of a

---

<sup>34</sup> (1959b), pp. 171-173.

<sup>35</sup> Wittgenstein (1953), § 67.

language-game to the effect that there can or could have been a different class of logical rules for a different language-game. I think not.

To start with, in the case of games such as "...board-games, card-games, ball- games..."<sup>36</sup> which Wittgenstein has in mind, there is a clear opportunity of comparing one with the other, and also, it is perfectly conceivable that we should have chosen different rules for each of these games. However these games are disanalogous to the game of logic in some important respects: for one thing, we do not have the opportunity of comparing our game of logic with the other logical games. Hence such a contention can make sense if and only if one can produce at least one logical game (if we can legitimately call them 'logical' at all) radically different than ours. Again, unlike the purported game, we find it difficult to conceive of such radically deviant logical games.

Furthermore, there are good reasons for one to doubt that there can be such games; thus, we might rightly ask, can there be a game in which the law of contradiction is violated, or indeed, a game which works solely on the grounds of *inconsistency*? Can we play such a game at all? Perhaps the very notion of a "rule", regardless of its content, does not make any sense if it is established on the ground of, in Putnam's words, "the absolutely inconsistent rule"<sup>37</sup>. But if the notion of a game cannot accommodate absolute inconsistency, then, there the law of contradiction seems to be a common property of all conceivable language-games. That is to say, logical laws cannot be identified with the rules of a particular language-game.

Again, as Nell<sup>38</sup> points out, it is crucial to know what we mean by being "the same" or "different" in order to make a sensible claim about "disagreeing" with the rules of another language-game, and thus for any debate or

---

<sup>36</sup> *Ibid.*, § 66.

<sup>37</sup> (1983b), p. 130.

<sup>38</sup> (1961), pp. 70-71.

conversation to take place in such a context. If so, the law of identity too seems to be another logical principle which is indispensable for any language-game.

It could be said that since, on the Wittgensteinian view, there is not an objective viewpoint -indeed there is no such a reality independent of our ratification- against which one can decide which of the rules of a different language-games are the right ones, by the same reason, there cannot be any difference between the rules of our language-game and the rules of a deviant language-game. Even to maintain that our rules are correct with reference to the semantic criterion that they are truth-preserving, on this account, begs the question given the Wittgensteinian principle that *logic is antecedent to truth*, and hence no one can possibly decide between a consistent and inconsistent, and thus between the truth-yielding and the falsity-yielding rules of two radically different language-games.<sup>39</sup> Wittgenstein thus seems to have thought that since the rules of logic do not correspond to any further reality than the contingent practises of the rules of our language-game, they cannot be either true or false.

According to realism, logic has its own ontology and logical rules correspond to abstract objects and their intrinsic properties and the relations obtaining among them. Thus realists think logical laws are true to the extent that they correspond to these objects. Therefore, just as a contingent proposition *p* is said to be true or false by reference to whether the corresponding state of affairs obtains, similarly, logical rules are be said to be true if and only if they refer to the ontology of logic, that is, logical properties.

Wittgenstein however rejects such a view. Indeed, let us suppose for the sake of argument that this view is indeed false. But the real question then seems to be what reasons might Wittgenstein have for the contention that logical rules do *not* have a ground or source independent from us? The roots

---

<sup>39</sup> See Wright (1980), pp. 310-311.



of the Wittgensteinian denial of the view that logic has an independent reality are intimately related to his considerations that logical rules are grounded in the arbitrary rules of our language-game; therefore, Wittgenstein, as a matter of fact, thinks that logical rules *do* correspond to a reality (the rules of a language-game); but such a reality -unlike the realistic one which is independent and thus necessary- depends upon our contingent language-game.

It is here where I think the Wittgensteinian position involves some substantial difficulties. To start with, such a position can be credible only if it can be demonstrated exactly in which sense logical rules depend upon our (contingent) language-game. That is, the onus of the proof is on the Wittgensteinian to show that logical rules are merely the rules of *our* language-game; therefore, that there can be radically different logical rules in other language-games; namely, only if it can be shown how there could have been an absolutely inconsistent language-game where every proposition *p* holds together with not-*p*. Otherwise the Wittgensteinian contention remains unsubstantiated.

Secondly, in arguing that logical truths are contingent as they are the rules of a language-game, it is conceptually necessary that Wittgenstein should presuppose the possibility of other language-games with different rules responsible for their, so to speak, logical principles. But then there remains a real question to be answered: what kind of possibility is taken to be responsible for the alleged possibility of radically different language-games? A logical possibility?

### 3.2 Anthropological Conventionalism

Yet it has been argued<sup>40</sup> that it is incorrect to think that the Wittgensteinian position entails such a radical "full-blooded conventionalism" as there are certain passages in his writings which might lead us to think that he advanced what might be labelled "anthropological conventionalism". According to this position, logical necessity is not an arbitrary rule which sets someone free to accept or reject the proof, rather it is a phenomenon to be explained in terms of human nature as determined by human biology, the natural history of man, or in terms of the linguistic agreement constituted by the human *forms of life*. In fact, such a suggestion seems to be accurate given, for example, the following passages:

"Then according to you everybody could continue the series as he likes; and so infer *anyhow!*" In that case we shan't call it "continuing the series" and also presumably not "inference". And thinking and inferring (like counting) is of course bounded for us, not by an arbitrary definition, but by natural limits corresponding to the body of what can be called the role of thinking and inferring in our life.<sup>41</sup>

And similarly elsewhere Wittgenstein says,

"So you are saying that human agreement decides what is true and what is false?"-It is what human beings say that is true and false; and they agree in the *language* they use. That is not agreement in opinions but in form of life.<sup>42</sup>

"What has to be accepted, the given, is -so one could say- *forms of life*"<sup>43</sup>.

---

<sup>40</sup> For such a line of interpreting Wittgenstein's philosophy of logical necessity, see Stroud (1965), pp. 79-84.

<sup>41</sup> (1956) I, § 116.

<sup>42</sup> (1953), § 241.

<sup>43</sup> (1953), p. 226.

It seems that Wittgenstein agrees with the objectivity of logical necessities as they are presupposed by certain intellectual activities of human beings such as thinking, reasoning, or inferring. But even though they are in this sense unassailable for us as they are certain natural constraints on our thinking, it is equally true that Wittgenstein would not concede that there is something more than the contingent anthropological phenomenon in virtue of which one should account for the existence of logical patterns. For, according to Wittgenstein, logical necessities are embedded in the actual linguistic practices in which each of us is engaged through our form of life; and this is a phenomenon to be related to *the natural history of human beings*.<sup>44</sup> Thus, on this understanding, conventions are not a matter of an explicit choice.

Apparently, anthropological conventionalism also seems to be a clear denial of a realist view of necessary truths: even though there are certain logical indispensabilities for there to be human thinking, what at best can account for this phenomenon is contingent human existence, not timelessly existing abstract interrelations. In other words, even if they are necessary *for us*, they are not necessary *in themselves*, that is to say, logical truths are not *necessarily* necessary, but *contingently* necessary. Provided that the natural history of mankind led it to adopt a different *language-game* or *form of life*, there would be a different set of logical truths than ours. In this connection, it becomes easier to see the basic motivation behind Wittgenstein's endeavour to portray the conceivability of aforementioned deviant ways of following a rule, measuring, and inferring. It is to show that what we ordinarily take to be unassailable and thus necessary *need not* have been so, and indeed, *could have been otherwise*; that is why one should not look for a metaphysical ground underlying the nature of logical necessity.

---

<sup>44</sup> (1956), I, § 142.



This position, indeed, seems to be intimately related to Wittgenstein's observations concerning grammar when he says, "it [grammar] is akin both to what is arbitrary and to what is not arbitrary"<sup>45</sup>. Correspondingly, grammar is arbitrary in the sense that there is not such a "*meta-level*" (an independent reality) to force it to be as it is; but still non-arbitrary to the extent that it is essential to our language-game, our form of life, and hence unassailable for us.

To sum up, then, on the anthropological conventionalist interpretation, the arbitrariness of logical necessity is not *external*, but *internal* to our language-game, or to our form of life. That is to say, there is no such external necessitation to force us to adopt one language-game rather the other save the fact that we are bound to particular constraints for there to be certain intellectual activities such as thinking, reasoning, inferring which are basic elements of our form of life. Logical truths are true not in every possible world<sup>46</sup>, but true only in the actual world. There could have been a possible world in which a different set of logical truths would have been actual.

But is that really true? Is it really conceivable<sup>47</sup> that there exists a possible world *W* in which the law of contradiction is untrue, or indeed necessarily false for the inhabitants of *W* whose form of life and way of thinking are entirely different than ours? We are, by ordinary criteria, inclined to say "no". But a possible Wittgensteinian move might be to question the notion of "conceivability", on the grounds of what Wittgenstein himself pointed out, "...so long as one thinks it can't be otherwise, one draws logical conclusions"<sup>48</sup> and that this is presumably due to the fact that "...he has not

---

<sup>45</sup> (1967), § 358.

<sup>46</sup> By the notion of "a possible world" in this context, I mean a possible form of life.

<sup>47</sup> It does not seem to me as reasonable to think that "conceivability" in this context can be a matter of temporal indexicality in that our future imaginations might accommodate, say, an absolutely inconsistent form of life.

<sup>48</sup> (1956), I, § 156.

any clear concept of what it would be like for it to be otherwise"<sup>49</sup>. One can agree with Wittgenstein on this point, but if this is true then the Wittgensteinian position itself turns out to be indefensible: if we are constrained by logical necessities in terms of certain anthropological facts related to our form of life and that they are in this sense unassailable for us, exactly on which ground can we say that logical truths could have been otherwise for some other, so to speak, conceivable creatures with a different natural/ cultural history? How can we say, on these grounds, that logical truths are necessary in that they are unassailable *for us*, but not *in themselves*?

Note that the Wittgensteinian position is considerably different from the Cartesian doctrine of modalities despite the similarity of the fact that both of them take logical necessities to be the outcomes of contingent facts, either in terms of the structure/ constitution of the human mind or of the set of particular anthropological facts. Descartes' argument that logical truths could have been otherwise even though we cannot conceive *how*, is explained by the postulation that there is no restriction whatsoever to God's power, that is, that God has an absolute control over the modal truth of necessary propositions. Therefore, if we do not know what it would be like to understand the negation of the law of contradiction, this is basically because of the fact that God has given us a mind such that we cannot conceive how a contradiction can be true; but, according to Descartes, this is not sufficient to establish that God cannot make a contradiction true, for our intellect is finite and God's power is infinite.<sup>50</sup>

Of course, the question whether the Cartesian position itself is coherent is a separate issue, therefore, I shall not go into any further discussion of it at this stage. However, one thing is clear: the Wittgensteinian anthropological

---

<sup>49</sup> (1956), IV, § 29.

<sup>50</sup> See Descartes (1970), pp. 240-241.

conventionalism lacks the Cartesian, so to speak, "meta-level postulation"; that is, the existence of a further reality such as God. Hence, one might understand the motivation behind the Cartesian contention that logical truths could have been otherwise, as infinite Divine power contradicts the thought that logical necessities are fixed, but how are we to understand Wittgenstein?

It seems to me that there are two possible ways of understanding the contention that although we are bound to the actual set of logical principles, and thus even though they are necessary for us, nevertheless they are contingently so. In order to maintain that position one must show how a different set of logical laws could be the paradigmatic patterns of a different language-game or form of life, where it is shown how, for example, a contradiction can be true; or the denial of the law of contradiction can function as the fundamental law in the paradigm. But this seems to be a very difficult, if not impossible, task, for the simple reason that we do not know what an inconsistent language-game or form of life would be like. If this is impossible, then, there seems to be at least another indispensable logical principle common to all possible language-games, grammars, or forms of life, namely, the law of contradiction. Hence it seems that there cannot be a language-game or grammar in which every statement is both true and false. But, could there have been certain contingent anthropological facts which might have led us to adopt a form of life in which every statement was both true and false? Or, could our form of life have made an absolutely inconsistent set of propositions true?

It is difficult to answer this question in the affirmative, for "consistency", one might say, is after all an objective fact, thus for example, in mathematics, we can understand the claim that we could have chosen another consistent set of axioms instead of the Peano axioms, but our nature cannot possibly make an inconsistent set of axioms true<sup>51</sup>. If so, there seems to be

---

<sup>51</sup> (1983b), pp. 125-126.



something more than contingent human facts which makes the actual set of logical laws true or necessarily true.

Nevertheless, one might say, given the basic anthropological conventionalist intuition, it has already been agreed that this is not achievable because of the fact that it is a possibility beyond the bounds of the actual human way of thinking or, form of life. But if one cannot be provided with such an alternative picture, anthropological conventionalism seems to end up with incoherence as it maintains that there can be radically different alternative sets of logical principles, but we do not know *what-it-would-be-like*, because they are beyond the bounds of our conceiving capacity. Indeed, this position would be very akin to the Kantian contention that there is a world of *noumena* to which we have no epistemic access, that is, none of our categories applies to it. But the question is: how we do know that there is such a world at all? Obviously if we can know that there is such a world, at least one of our concepts applies to it. Similarly, on which epistemic ground(s) might the anthropological conventionalist be justified in claiming that even though the actual set of logical principles is necessary or unassailable for us due to certain contingent anthropological facts, still there are or there could have been radically different logical schemes? Can we really make sense of such a proposal?

Surely, if we cannot conceive how necessary truths can be or could have been false, by the same token, it is beyond our conceiving-ability to argue that necessary truths nonetheless could have been otherwise. In other words, if

(1) The human-conceiving abilities determine the modal properties of necessary propositions (i.e., what is necessarily true and necessarily false) is true, and (1) entails

(2) Human beings cannot conceive how necessary truths can be or could have been false

then, the following proposition,

(3) What is *actually* necessary for us is *contingently* so, hence, could have been otherwise, does not seem to be a legitimate assertion. That is to say, if (1) and (2) are true, we cannot possibly have the conceiving-ability that one needs for holding (3), and for, so to speak, a possible epistemic access to the domain of what is as a matter of fact inconceivable by us. In order to maintain (3), in other words, it has to be possible for us to imagine the negation of the actual set of necessary propositions, this, however, would simply beg the question as it has already been conceded that this is humanly inconceivable. Of course, (3) can be maintained together with (1) and (2) if and only if one presupposes an external "god's-eye view" point, from which *ex hypothesi* one can discover whether what is humanly inconceivable, necessary, is, as a matter of fact contingently or necessarily so -hence whether the human mental constitution could have been different than it is- (once again, this seems to be the main difference between the Cartesian and the Wittgensteinian argument). Or else, what seems to be compatible with (1) and (2) is an agnosticism with respect to (3); that is, to assent to the contention that one cannot know whether the actual set of logical necessities is contingently or necessarily so on the basis of the fact that no human being can have access to, so to say, the "meta-conceivabilities", if there is such a realm at all.<sup>52</sup>

---

<sup>52</sup> Nevertheless, one might think that the *contingency* of the set of necessary truths is defensible on the basis of the fact that it is human intellectual abilities that is ultimately responsible for the existence of necessary propositions and that human beings do not exist necessarily, but contingently. Hence, in this case, the counterfactual,

(1) If there were no human beings, there would be no necessary propositions, would have been true. But this is a different proposal (I shall return to this later) than Wittgenstein's; for his argument is not related the existence of necessary propositions as *such*, but rather, with their *intrinsic* properties, that is, with the *nature* of their modal properties. To be sure, it is one thing to think that necessary propositions could or could not have failed to exist, and altogether different thing to say that they could have existed

The difficulty, in other words, is with the anthropological conventionalist idea that even though we are bound to the actual set of necessary truths and thus that they are unassailable for us in the sense that they are an indispensable part of our form of life; nevertheless they are contingent. Now to say that  $p$  is contingent, to be sure, is to say that there are alternatives to  $p$ , but, then, the real question is whether there are alternatives to the actual set of necessary truths.

Of course, nothing seems to be wrong with the idea that there are different forms of life, indeed, our form of life is conceivably contingent in many respects, but that is not the issue. Rather, the problem is whether all aspects of our form of life are contingent, and in particular, whether it is a matter of contingency that we treat necessary truths as unassailable. Now, to say that is contingent is to maintain that there are alternatives to our form of life in this respect, that is, there are alternatives to our actual set of necessary truths. But what are these alternatives, if there are any at all?

If the anthropological conventionalist rejoinder is again that these alternatives are not conceivable by us, then, the question once more is: how do we know that there are alternatives at all? On the other hand, if we cannot conceive that there are alternatives to the actual set of necessary truths, how do we know that it is contingent? It seems to me that if the anthropological conventionalist view is to survive the charge of inconsistency, it must show how the alternative ways of thinking, calculating, inferring are indeed

---

with different modal properties. So for example, it might be said, on the former view, it is a possible state of affair that number 7 or the proposition

$$(2) \ 2 \times 2 = 4$$

should not have existed, but once number 7 exist, it could not have been smaller than number 5, similarly, (2) could not have failed to be  $2 \times 2 = 4$ ; that is, it could not have been  $2 \times 2 = 3$ , or  $2 \times 2 = 5$ ; yet on the latter view, this could have been true. The former seems to relate to the ontological status of necessary truth whereas the former to their modal aspects, if such a distinction can be drawn at all.



possible (conceivable), otherwise it seems to be incoherent in that it presupposes the conceivability of what itself grants to be inconceivable<sup>53</sup>. If so, the very contention of the anthropological conventionalism, that is, that the actual set of necessary truths is contingently as it is, turns out to be an unjustified claim.

Then, it seems accurate to conclude that both radical conventionalism and anthropological conventionalism are untenable.

---

<sup>53</sup> Wittgenstein, it seems to me, was well-aware of such a difficulty and presumably this is why he explicitly tried to show how different ways of calculation etc., -therefore, radical conventionalism- could be made intelligible. Kripke seems to have pointed out the same difficulty when he writes:

Can we imagine forms of life other than our own, that is, can we imagine creatures who follow rules in bizarre quus-like ways? It seems to me that there may be certain tension in Wittgenstein's philosophy here. On the one hand, it would seem that Wittgenstein's paradox argues that there is no *a priori* reason why a creature could not follow a quus-like rule, and thus in this sense we ought to regard such creatures as conceivable. On the other hand, it is supposed to be part of our very form of life that we find natural and indeed inevitable that we follow the rule for addition in the particular way that we do. (...) But then it seems that we should be unable to understand 'from the inside' (...) how any creature could follow a quus-like rule. (1982, p. 98, 78n).

**CHAPTER FOUR**  
**CONCEPTUALISM, REALISM AND GOD**

#### 4. CONCEPTUALISM, REALISM AND GOD

The task we set for ourselves on the philosophical problem of necessity was to answer the two fundamental questions posed by Dummett, that is: what is the source of necessity and how do we recognise it? Thus formulated, it was maintained, the problem of necessary truths, on the one hand, is concerned with the metaphysical issue of necessity, appealing for what might be the ground of our modal commitments, and, on the other hand, it is concerned with the epistemological issue of necessity by asking what might be the nature of our knowledge of modal propositions.

Having considered certain prominent approaches thus far we have not attained a satisfactory answer to our problem. Both the naturalistic and conventionalist proposals fail, I think, because of their reductionist character. In this connection, it has been argued that necessary truths can hardly be taken to be either an extension of physical reality -logical necessity naturalized- nor be grounded in their being true in terms of the meaning of the words involved -analyticity-, nor to be a matter of the grammar of arbitrarily set down conventions or language-games. By contrast, most of the foregoing considerations seem to have shown that there are certain, so to speak, necessity-involved boundaries which are indispensable for any intelligible discourse to take place, and thus for there being certain rational activities such as thinking, inferring and so on. This, on the face of it, fortifies the intuition that there is a non-arbitrary modal reality independent of any subjective dispositions to which our modal speech is answerable.

Indeed, the admission of such an independent (or external) modal reality is crucial to modal realism which, contrary to reductionist approaches,



holds that necessary propositions are either true or false, and thus if true could not have been false, and similarly if false could not possibly have been true. Hence it seems accurate to mark the *realism* of necessary truths as an *essentialist* thesis in that it holds the view that necessary propositions have their truth-values essentially: a necessary proposition therefore has the property of being either true or false essentially while a contingent proposition has the property of being either true or false accidentally<sup>1</sup>. And the modal reality itself to which the truth conditions of modal propositions are answerable, the modal realist might say, is timelessly existing abstract objects and their intrinsic properties and the relations obtaining between them.

In the preceding chapter, it has been argued that the Wittengensteinian anthropological conventionalism, according to which necessary propositions are to be understood in reference to contingent facts about the natural or cultural history of human beings, is untenable. Moreover, it has been argued that such a position cannot consistently be maintained on the grounds that once it is assumed that we cannot transcend the bounds of conceivabilities, then it does not seem to be a warranted claim to maintain that necessities thus conceived are a matter of contingency. However this can by no means be taken to be the final verdict on any attempt to account for the necessities in anthropocentric terms.

In this chapter, I shall argue that a better picture for our understanding of necessary truths can be developed on the basis of the divine-mind dependency which one might label as "Divine Conceptualism". However, before that, we have to see why a conceptualism in terms of the human-mind dependency is not tenable. Therefore, I shall examine a couple of such approaches. Human Conceptualism comes in different forms, for example it can be psychologistic, or naturalistic, or rationalistic or intuitionistic, all of

---

<sup>1</sup> Plantinga (1987), pp. 189-191.

which, however, explain necessary truths with reference to certain human intellectual faculties.

#### 4.1 Quasi-Realism

Simon Blackburn has recently argued that necessary truths can be explained with reference to the bounds of our imagination under what he calls "projectivism" or "quasi-realism":

Projectivism is ... a promising option in the theory of logical necessity. We not only believe it to be true that  $7 + 5 = 12$ , but we also find the truth inexorable: it could not have been otherwise. We cannot imagine it otherwise; we could make nothing of a way of thought which denied it. But this may be just a fact about us and the limitations of our present imaginations,... he [the quasi-realist] will deny that anything more can be meant by the real modal status of a proposition, than can be understood by seeing it as a projection of our (best) attitude of comprehension or imagination towards it.<sup>2</sup>

The quasi-realist does not think that there is a set of modal facts, to which the truth-value of modal propositions are subject, independently of our projective mental states; therefore, the talk of necessary truths "involves no irreducible appeal to a ... modal reality. It is here that the opposition [of quasi-realism] to realism lies..."<sup>3</sup>

The problem of necessity, thus understood, leads one to a *psychological* account of modality inasmuch as a proposition is held to be necessary on the grounds of our own mental attitudes in terms of its being unimaginable to have been otherwise. The notion of necessity, and therefore, of necessary truths and falsehoods are embedded in the human mind, and thus it is human

---

<sup>2</sup> Blackburn (1984a), pp. 216-217.

<sup>3</sup> Blackburn (1993), p. 55.

conceiving which delimits what is necessary and possible. On this view, therefore,

(A) *P* is necessary if and only if it is impossible to conceive *p* otherwise.

But can one really maintain (A)? Our objection to the Wittgensteinian anthropological conventionalist was that one cannot consistently hold the view that it is inconceivable how a different set of necessary truths could have been true other than the actual one together with the thesis that, nevertheless, the actual set of necessary truths is contingently as it is, and therefore, it could have been otherwise. However, it does not seem to be that clear whether one can hold a similar position in the following way. For, given that modality, in principle, is a matter of what is humanly conceivable, it seems to be a justified claim,<sup>4</sup> in counterfactual terms, to say that,

(1) If the human beings had different conceiving limitations necessary propositions could have been otherwise.

Even though, on the face of it, nothing seems to be wrong with such a counterfactual (1), in that given (A), it seems to be a justified claim, nevertheless, it is obscure whether the antecedent of (1) could have been true at all. Could human beings have had different imagination, and thus different limitations on their conceiving-power?

One might find it natural to say they could not, given that we cannot conceive its being otherwise. Thus if, it would be argued, our imagination could not have been otherwise, if there is no way to conceive how the antecedent of (1) could have been true, then (1), as a counterfactual with a necessarily false antecedent, will be vacuously true.<sup>5</sup>

---

<sup>4</sup> See Cassam (1986), pp. 452-453.

<sup>5</sup> For an account of vacuously true counterfactuals, see D. Lewis (1973), p. 16.



This point can be a matter of further debate but I shall not pursue this line of argument any further as it seems to me that there is, after all, a *prima facie* difficulty with the quasi-realist account of necessary truths in general: how are we to know whether the fact responsible for the phenomena of necessary truths is our conceiving-power or not? Clearly, it is one thing to claim that our imagination (or conceiving-power) is bound to the actual set of necessary truths, and indeed, it is an altogether different thing to take our imagination as being responsible for the existence of necessary truths and thus to hold that it is the seat of modality. Yes, it seems to be an incorrigible fact that our imagination is limited to certain necessities and also impossibilities, but, it is not thus transparent to us whether this fact, our imagination with its actual limits, can legitimately be taken to be responsible for the very ground or source of necessary truths. Certainly, it is intelligible that there should be a fact, other than our imagination, to which the existence of necessary truths -and perhaps our imagination as well- is accountable even though we suppose that there is a full correspondence between what is necessary and what is unimaginable for us. If so, it is not a legitimate step to jump from the fact that we cannot, as a matter of fact, imagine how necessary truths could have been otherwise to the conclusion that what is responsible for necessary truths being as they are is our actual imagination.

To be sure, whether one can *reasonably* hold the view that our imagination is responsible for necessary truths is another question. However, the quasi-realist contention is stronger than such a view in that it maintains that necessary truths "could not have been otherwise". Indeed this seems to manifest a hidden contradiction in the quasi-realist account as it, on the one hand, maintains that necessary truths may be about us and our present imaginations and, on the other hand, holds that they could not have been otherwise. Before considering this point, however, one might ask, how can we make sure that there is not a fact other than our imagination for the

necessities of our thinking? Given that it cannot be our imagination which informs us whether itself is the fact responsible for the phenomena of necessary truths, what else it can be?

It seems to me that one needs to presuppose an external "god's eye view" for making the claim that necessary truths are answerable to our imagination, that is to say, that our imagination is the necessity-making faculty and the source of modal propositions, yet, I cannot see how the quasi-realist can legitimately have such an external eye view.<sup>6</sup>

Apart from such general difficulties with any psychological account of logical necessity in terms of being dependent on the human mental dispositions, the Blackburnian projectivist (quasi-realist) exposition of the problem in hand seems to involve some further difficulties: even though one might agree with the basic projectivist claim that it is the limit of our imaginations which makes something necessary for us, it is hard to see what reasons Blackburn might have for the contention that "this may be just a fact about ... the limitations of our present imaginations". What do we exactly mean by "present imaginations" in this context? If by that Blackburn has in mind the idea that modality, as a matter of mental dispositions, is, so to say, the product of an evolutionary process, then, one needs to show how it would be understandable that, although  $2 + 2 = 4$  is necessary due to the fact that the limits of our present imaginations disallow us to think it otherwise, nevertheless, it is possible that, for instance, our "future imaginations" might

---

<sup>6</sup> There can be, on the other hand, a general difficulty with the identification of necessary truths with what is in principle imaginable or conceivable in that one can to some extent fictionalise violating the laws of logic where, say, a fictional character  $x$  is here and there (or,  $x$  is  $F$  and not- $F$ ) at the same time. Thus, with Morris, one might say that even if "...many impossibilities are consistently describable to a point, and in this sense conceivable ... we must always carefully distinguish this sort of conceivability and genuine possibility. something is genuinely possible in the broadly logical sense ... only if it is actuality would be compatible with all the necessary features of reality, including, for example, the laws of mathematics." (1986, p. 114).

accommodate the fact that this is false, and thus provide the means whereby  $2 + 2 = 5$ , or the number 9 is smaller than number 7.

Yet, by "the limitations of our present imaginations" Blackburn might have in mind "the limitations of our actual imaginations", and thus, it might be argued, such a position cannot fairly be drawn from what has been said considering that, after all, it contradicts the projectivist's own claim that  $7 + 5 = 12$  is not merely true, but indeed necessarily true, since "it could not have been otherwise". To be sure, this might be true, but then what about the projectivist claim that a necessary proposition such as  $7 + 5 = 12$  could not have been otherwise? Given that the modal truth of necessary propositions is ultimately a matter of our own mental attitudes, or imaginations, it does not seem to be a legitimate assertion that necessary truths could not have been otherwise.

In fact, this is rather dissimilar to the Wittgensteinian position criticised in the previous chapter. The difference is that while the Wittgensteinian argues that what we take as necessary propositions could have been otherwise, the quasi-realist holds that they could not have been otherwise. But if so, again, given that

(2)  $P$  is logically necessary for us if and only if we cannot imagine (conceive)  $p$  otherwise,  
and that (2) implies,

(3) What is logically necessary delimits the bounds of our imagination,  
it is hard to see how one can legitimately maintain that,

(4) What is logically necessary could not have been otherwise.

Once again, if (2) and (3) are true, then the verdict "could not have been otherwise", viz., (4) mediates a fact beyond the limits of our imagination, and thus beyond our knowledge.

Again, what seems to be compatible with (2) and (3) is an agnosticism with respect to (4). If the bounds of our conceiving or imaginative abilities are



limited by what is logically necessary, then neither the claim that what is logically necessary could have been nor the claim that it could not have been otherwise, seems to be warranted. In short, therefore, if necessity-impossibility and contingency-possibility are to be defined in terms of inconceivabilities and conceivabilities for which the human imaginative capacities are taken to be responsible, it seems that we cannot possibly know whether the bounds of our conceiving power could have been otherwise.

Furthermore, given that the quasi-realist acknowledges the fact that necessary truths could not have been otherwise, then, as Cassam rightly pointed out<sup>7</sup>, one might wonder what explanation he can propose for such modal claims, that is, that necessary truths *could not have been otherwise*, hence that their falsity is *impossible*. Indeed, such a position turns out to be *circular* in the sense that it states that we cannot conceive necessary truths being otherwise because they are impossible, but, in turn, necessary truths are impossible because we cannot conceive their falsity.<sup>8</sup>

Such a difficulty, I think, partly stems from the ontological reductionist character of the quasi-realist view of modality in that modal discourse is basically seen to be "expressive" rather than *truth-conditional* or *assertoric*,<sup>9</sup> and therefore, one can talk as *if* there is modal fact where in fact there is not.<sup>10</sup>

---

<sup>7</sup> *Op. cit.*, pp. 458-59.

<sup>8</sup> *Ibid.*, p. 459.

<sup>9</sup> For such a line of criticism of the quasi-realist view, see Wright (1987), pp. 33-35, and (1989), p. 50.

<sup>10</sup> See Blackburn (1993), p. 55.

## 4.2 The Cautious Man

However, there has been another proposal, advocated by C. Wright<sup>11</sup> and E. J. Craig,<sup>12</sup> which seems to be invulnerable to some of the criticisms levelled against quasi-realism. The attempt is characterized by a sceptical character, "the Cautious Man", who, even though he agrees with us on the inconceivability or unimaginability of necessary truths being otherwise, nevertheless holds back in ascribing *necessity* to them:

the distinctive feature of his [the Cautious Man's] behaviour is that he will never admit that any truth is *necessary*. Faced with a proof, or an allegedly necessary statement, the Cautious Man will happily say everything else that we would (...). He will give the same accounts of the meanings of all the terms involve; he will agree that the allegedly necessary statement is, if not necessary, at any rate true, that he feels the greatest confidence that it will always be true, and indeed that he cannot imagine its being otherwise. If what is in question is not a single statement but a proof, he will agree with us that every line is either an axiom or the result of the correct application of one of the rules of inference to an earlier line or lines; he will agree that he can't imagine that sequence of symbols failing to be an admissible result of applying those rules of inferences to those premises. But he goes on insisting that, as far as he is concerned, all these things are just truths - he is not disposed to take the step from unimaginability of the contrary to their necessity. The limit of his imagination, ... is still just another fact about him, he sees no reason to take it as a guide to what must of *necessity* be the case.<sup>13</sup>

The Cautious Man standpoint, as one can see, resembles the quasi-realist in regarding so-called necessary truths to be embedded in our imaginative powers; but unlike quasi-realism it refrains from modalising the set of so-called necessary propositions. Hence, although the quasi-realist affirms that

---

<sup>11</sup> (1980), pp. 452-467.

<sup>12</sup> (1985), pp. 89-112.

<sup>13</sup> *Ibid.*, p. 93.

(B) *P* cannot be imagined otherwise = *P* is necessary,

the Cautious Man does not. For he thinks that there is an element of *decision* involving in modalising a statement, in going "beyond the Cautious attitude, moving from an acknowledgement of everything which that attitude grants in the particular case to acceptance of a necessity"<sup>14</sup>.

One might wonder what the Cautious Man's conception of necessity might be, therefore, what exactly he repudiates when refusing to modalise a proposition which by ordinary criteria we take to be necessary. One of the motivations which Craig points out is that: "We might, for instance, come to be able to imagine what we can't now imagine, there may be other beings who can imagine what we can't and never will be able to imagine and so on."<sup>15</sup>

Certainly, the Cautious Man is right in challenging the equation between "unimaginability" and "necessity". Thus, for example, as Forbes pointed out, given that we have been visually presented with a creature which to the best of our knowledge is either a human or an android, but in fact is an android, then, it would seem that it is *conceivable* or *imaginable* that the creature in question is a human being. However, given that it is of logical necessity that an android is not a human being, then it would follow that one cannot identify what is conceivable or imaginable with necessary truths.<sup>16</sup> So, although our imagination can indeed be fallible, this bears no relevance to what is in fact logically, modally, the case. But if there is not a necessary relation and thus they are not co-extensive, then one can reasonably agree with the Cautious Man in rejecting (B).

---

<sup>14</sup> Wright (1980), p. 457.

<sup>15</sup> (1985), pp. 90-91.

<sup>16</sup> Forbes (1985), pp. 221-222.



Again, it can be argued that the idea that the limitations of our imagination might change deserves respect, because there is a clear sense in which such limitations can be thought to be indexed to our knowledge and experience; hence they are flexible rather than being fixed. Thus, for example, something can be unimaginable to *S* at *t*<sub>1</sub> , but this might turn out to be imaginable to *S* at *t*<sub>2</sub> , and also what can be imaginable to *S*, might not be imaginable to *M*, and so on. After all, there can be certain things which though imaginable, are nevertheless impossible, thus, for instance, someone other than Caesar can imagine himself being Caesar, but his being Caesar is not logically possible. Accordingly, taking (un)imaginability as the ground of (im)possibility does seem to be wrong<sup>17</sup>. But then the question would be on which grounds the Cautious Man can reject necessitation? If necessity has nothing to do with unimaginability then it becomes difficult to see how the Cautious Man's rejection of necessity on the grounds of the fact that our imaginative powers are changeable is to be understood.

Secondly, consider

(5) Water is unwet

and

(6)  $2 + 2 = 5$ .

Arguably, we cannot imagine how (5) and (6) can be other than false, and moreover we can have a strong disposition to believe that neither (5) nor (6) will ever be true. If so, on the Cautious Man's view, there should be no difference between (5) and (6) if the issue turns on what is in principle unimaginable. Yet, there is an intelligible difference between these two propositions in that while (5) seems to be false on inductive grounds and thus logically contingent, (6) does not seem to be so. Indeed, at this point, the Cautious Man position seems to be indistinguishable from the Millian

---

<sup>17</sup> See, Blackburn (1993), pp. 68-69. It is notable that, Blackburn, later on, recognizes the difference between what is "unimaginable" and "inconceivable". See *ibid.*, p. 68.

inductivist. Yet it has already been shown that necessary propositions cannot be considered as equivalent to empirical propositions, no matter how highly probable those propositions may be. The defender of the Cautious Man position might challenge this inference, but I cannot see how he can introduce a distinction between two different kinds of propositions such as (5) and (6) on the proposed grounds of unimaginability alone.

Thirdly, can we really make sense of the contention that there is an element of decision involving in one's modalising a proposition or a proof? How about entailment-statements such as, *if*

(7) All men are mortal

and

(8) Socrates is a man,

*then,*

(9) Socrates is mortal.

Given the truth of (7) and (8), there seems to be no way to avoid the conclusion (9) which *necessarily* follows from them. Can we make sense of such an inference or entailment without presupposing the notion of necessity? Can one agree on the premises (7) and (8), yet reject the conclusion, that is, (9)? The Cautious Man's rejoinder to this would presumably be negative, but, if so, what is the exact role of decision involved here? What difference would the Cautious Man's modalising make to the conclusion of such an argument? Could the Cautious Man have an independent reason for holding back in the necessitation of such an argument? I do not see any.

More importantly, the notion of necessity is essential for our understanding of the notion of logical form in the sense that a logical form, such as *modus ponens*, can be thought to be valid if and only if it is *necessarily* truth-preserving, that is, if and only if it necessarily yields no falsity from true premises for all its instances. If so, the Cautious Man cannot give a proper explanation for the validity of logical forms.

Consequently, it seems to me that the notion of necessity is indispensable in order to make sense of the difference between various propositions as well as there being certain intellectual activities such as arguing, thinking. The Cautious Man's attitude thus seems to be unpromising inasmuch as, after all, it does not add anything considerable in one's understanding of the problem of necessary truths; in other words, it resolves the problem at the cost of removing it from the scene.

#### 4.3 Realism, Anti-Realism and Truth

Having considered two non-realist attempts to analyse necessary truths in terms of "imaginability" or "inconceivability", it seems reasonable to conclude that neither of them can satisfactorily explain the ground of necessity and necessary truths. But given that not all approaches in terms of mind-dependency need be reductionist, it might be argued that the basic idea of such an approach (mind-dependency) seems to be rather insightful inasmuch as it is counter-intuitive to suppose that there are propositions, necessary truths, independently of minds, persons holding or judging them<sup>18</sup>. Thus, it could be argued that necessary truths are mind-dependent in that they are the products of human mental activities, and therefore, on this view,

(C) Had there been no minds -i.e. no human beings- there would not have been necessary truths.

---

<sup>18</sup> For such an argument for the mental reality of propositions, see Plantinga (1982), pp. 67-68. And also see Pollock (1984), pp. 7-8. Similarly, Bealer pointed out that "Thoughts [propositions] are the sort of thing that can be believed, disbelieved, remembered, forgotten, understood, asserted or denied in language, advanced as theories, etc. This to say, thoughts are natural objects of intensional relations" (1982, p. 184).



Conceptualism thus understood seems to situate itself in an intermediary position between realism (platonism) and nominalism, in the sense that while it repudiates the platonic view according to which necessary truths designate logically necessary relationships among the eternally existing realm of necessary objects (the Forms, universals), nevertheless, it does not reject the very existence of necessary truths (and thus the existence of abstract objects such as properties, relations and propositions). Rather the basic dispute between realism and conceptualism hinges upon the ontological character of abstract objects and necessary truths. Thus, although for the conceptualist, the existence of a mind is a necessary condition for the existence of necessary truths as they are essentially mind-dependent entities, the realist thinks that there would have been necessary truths even if there had existed no minds at all.

Apart from this disagreement, however, another fundamental disagreement between realism and conceptualism seems to be that while, in the former, necessary truths are discovered, therefore, from an epistemological point of view, recognised by us, in the latter, they are mental constructions. Viewed from this perspective, however, conceptualism seems to be reminiscent of intuitionism,<sup>19</sup> hence it seems appropriate to consider it in conjunction with an intuitionist account of necessary truths, which also seems to link with the ongoing debate between realist and anti-realist theories of meaning and truth.

At the heart of any realist theory of meaning is its affirmation that the meaning of a declarative sentence *S* consists in *S*'s truth-conditions which obtain independently of our epistemic/ noetic structure. Thus, for any statement there is an independent state of affairs in virtue of which it is either true or false; and it is in principle a possibility that the truth value,

---

<sup>19</sup> Indeed as Quine (1953a, p. 14) rightly pointed out, intuitionism is the modern counterpart of the medieval conceptualism of universals.

therefore, the meaning of a statement might outrun our epistemic capacity to recognise it, i.e., transcend the limits of our knowledge. So, for example, given the fact that our knowledge of mathematics does not exhaust all mathematical propositions (truths or falsehoods), on this account, it is a legitimate assertion that there could be a mathematical proposition which, even though it transcends our capacity to recognise it is nonetheless determinately either true or false. Therefore, it might be said that it is a part of realist semantics to endorse the principle of bivalence for all possible statements including the possibility of verification transcendent truths.<sup>20</sup>

By contrast, on an anti-realist account, the meaning of a sentence *S*, it is argued, consists in *S*'s assertibility conditions, and therefore, the gap between *S*'s being independently true or false and our capacity to recognise that truth is removed. Indeed, since, on this account, there cannot be any proposition which might be true independently of its assertibility or verifiability conditions, the set of meaningful statements must be restricted to those which as a matter of fact are decidable inasmuch as there is no determinate reality beyond our epistemic access to it. And thus, for example, whether a mathematical statement is meaningful (true or false) crucially depends upon the availability of the proof for that statement; the proof being a matter of the fully exercisable mathematical capacities of the speaker. Therefore, the proof or refutation presented for a mathematical proposition to be true or false is ultimately a finite construction as it is ultimately grounded in the intellectual activities of human creatures which are finite. In other words, since, for the anti-realist, truth is basically an epistemic rather than a metaphysical notion, what makes a proposition true -if "true" is predicable on the anti-realist theory of meaning at all- is its assertibility-conditions. Consequently, although, on the anti-realist account, the existence of non-

---

<sup>20</sup> This is Dummett's characterisation of realism, see his (1959a) and (1973b) especially p. 315, and also Rasmussen and Ravnkilde (1982).

decidable propositions is admitted, yet, contrary to realist view, there cannot be verification-transcendent truths. Consequently, the realist claim that the principle of bivalence is applicable to these -undecidable- propositions is radically rejected. For, the anti-realist argues, our language accommodates certain sentences such as subjunctive, counterfactual conditionals, sentences referring to the humanly inaccessible realms, and those which make reference to unbounded quantification over infinite totalities, which make the realist principle that every statement is determinately either true or false inapplicable.<sup>21</sup>

The main difficulty with anti-realism, however, pertains to its criterion that what makes a sentence meaningful is its assertibility-verifiability conditions. But why should we think that what makes a sentence meaningful and thus either true or false is its assertibility conditions? Could there not be a sentence *S* which is assertible -justifiably warranted- but still false or *vice-versa*? What seems to be problematic is that the notion of assertibility is far from clear. Thus, given that the standards of assertibility might change from person to person, or from community to community, this seems to lead us to some kind of relativism. So, for example, if we assume that there might be some creatures who are much more intelligent than ourselves, there seems to be no reason why their epistemic standards, hence the standards of assertibility, should not be much higher than ours.<sup>22</sup>

Still what seems to be most counter-intuitive on this account, is its denial of the possibility that truth might outrun our epistemic capacity; i.e. the existence of truth beyond our possible recognition. But granted that it is an essential fact about us that we are finite and thus time and space bounded creatures, it seems inevitable that our epistemic capacities must be restricted.

---

<sup>21</sup> Dummett (1991), p. 315.

<sup>22</sup> See Plantinga (1982), p. 51.



If so, however, there seems to be no reason to think that our recognitional capacity should exhaust what is in principle knowable.

On the other hand, the intuitionist (anti-realist) thesis that mathematical reality is fully grounded in our recognitional capacities seems to necessarily entail *finitism* in mathematics. Thus, considering certain natural facts about human beings such that they are necessarily finite, bounded with time and spatial order, intuitionism, contrary to classical view of mathematics, repudiates the idea that infinite mathematical structures can in principle be completed. So, for example,<sup>23</sup> the realist might hold that Goldbach's conjecture, that is, that every even number greater than two is the sum of two primes, submits to the principle of bivalence, viz., that it is determinately either true or false. Whereas the anti-realist -intuitionist- denies this, since there is no procedure enabling us to check all even numbers one by one in order to see whether there is a proof for the conjecture in question. She must deny that this task can successfully be performed. Likewise, from an anti-realist point of view, it is unfeasible to quantify over infinite mathematical or non-mathematical totalities, but the question why this is impossible turns on certain aforementioned natural and necessary constraints about ourselves, namely, that we are time-space bound creatures. Yet, there seems to be no reason why a being free from these constraints, so to speak, a being with infinite recognitional capacities, cannot know the truth value of quantified statements over infinite structures, and thus to know whether Goldbach's conjecture is true or false. Consequently, the anti-realist, restricting all meaningful statements to those which are humanly recognisable, and thus assertable on these grounds, seems to unnecessarily restrict such a legitimate idealisation<sup>24</sup> with respect to the truth value of the statements transcending our recognitional capacities.

---

<sup>23</sup> McDowell (1989), pp. 173-192.

<sup>24</sup> George (1993), pp. 53-72.

As seen, most of the difficulties with anti-realism stem from the anti-realist understanding of "truth" as an epistemic notion, to be defined in human noetic terms, and from the basic anti-realist intuition that if there were no human beings (minds), there would not be things like propositions. Yet, this only seems to be an outcome of the ill-founded anti-realist assumption that human knowledge should exhaust what is in principle knowable. In addition to this, and to the challenge of finitism which goes against the rationality of explaining the ground of necessary truth in terms of human conceptualism, there seems to be some further reasons for thinking that anti-realist (conceptualist-intuitionist) proposal is far from being convincing. For one thing, it is as matter of fact true, as Adams pointed out, that "we are too easily mistaken about necessary truths and too often unable to recognise them"<sup>25</sup>; and secondly and more importantly, although one might agree with the basic intuition behind the conceptualist -anti-realist- view that necessary truths are essentially mind-dependent objects, nevertheless, it contains some radical difficulties when one takes the modal properties of necessary truths into consideration. Thus it is agreed by all that, essential to the conceptualist view is the idea that necessary truths are mind-dependent, therefore, on this account, it is a necessary truth that,

(D) Necessary truths exist if and only if there is a mind to hold them.

Given (D) the existence of a mind is a necessary condition for the existence of necessary truths. But, it is an undeniable fact that human beings exist contingently, hence that it could have been the case that there are no human beings. Yet it is equally true that propositions, as abstract objects, could not have failed to exist, and more significantly, as necessary truths could not have failed to be true. Thus it can plausibly be argued that one can, for

---

<sup>25</sup> (1983), p. 51.

example<sup>26</sup>, conceive that there was a time when no human mind existed, but it is hard to imagine a time when the proposition that  $2 + 2 = 4$  or that *the whole is greater than the part* did not exist or was false. If that is true, however, one runs into a paradox: necessary truths owe their existence and the property of being essentially (necessarily) true to the contingent existence of human beings. But how can this be true?

#### 4.4 Realism, Conceptualism and God

Considering that none of the theories hitherto examined does real justice to our intuitions about necessary truths, we have seen that there are good reasons for eliminating them in favour of realism which explains necessary truths by reference to abstract objects and their intrinsic properties and the relations obtaining between them.

Realism, however, has its own problems. Thus, one of the prevalent objections to realism has been that it is somehow unable to provide a satisfactory explanation for our knowledge of abstract objects. This objection, however, as Hale put it, "has been developed against the background assumption of a broadly causal conception of knowledge"<sup>27</sup>. Yet, given that a causal theory of knowledge is not self-evidently or necessarily true for all domains of our knowledge, it might be said that the realist is under no obligation to give a causal explanation for our knowledge of abstract objects. It is thus open to the realist to maintain that a causal theory of knowledge is simply irrelevant to the case of abstract objects in that they, unlike physical objects, do not exist in space-time. Instead, she can hold a rationalist view

---

<sup>26</sup> See Plantinga (1980), p. 4.

<sup>27</sup> (1994), p. 299. Thus, according to Hale, since a satisfactory epistemology of necessary truths is yet to be developed, there is not a special epistemological problem facing realism in particular. See *ibid.* pp. 299-325.



according to which our knowledge of abstract objects and necessary truths is purely *a priori*, and therefore it can be seated in reason alone.<sup>28</sup>

In saying this, the realist might indeed be right, but it seems that such an explanation can carry conviction only when it is made clear how the relation between the propounded *a priori* contents of the human mind and the mind-independently existing abstract objects can take place. A further explanation is needed for the interaction occurring between ontologically independent abstract objects and the epistemological faculties of the human mind in this respect. But given that abstract objects, as causally inert entities, cannot cause the human mind to have such an innate faculty, the question is: what else can?

On the other hand, the realist says that necessary truths owe their truth and necessity to the *intrinsic properties* of abstract objects and the *relations* obtaining between them. Necessary truths, thus understood, are explained in *de re* terms as they reflect the nature or essence of objects (abstract or whatever) involved.<sup>29</sup> Necessary truths also reflect the *relational properties* of abstract objects. Indeed, the role of the ontology of the relations is momentous in explaining necessary truths: they not only knit abstract objects together such that they make a proposition (necessarily) true, but are also crucial for our understanding of why a proposition *p* can entail another proposition *q*. It is therefore hard to account for the ground of certain logical operations such as "deduction", "entailment" or "consequence" etc., without invoking the existence of the relations between abstract objects.

Abstract objects or (in Platonic terms) the Forms<sup>30</sup> therefore stand in certain relation to each other like, so to speak, a 'family structure'; there seems

---

<sup>28</sup> For a recent defence of a rationalist epistemology of abstract objects on these grounds, see Katz (1995).

<sup>29</sup> Fine (1994) defends a generalized view of *de re* necessity in virtue of the nature or essence of the objects involved.

<sup>30</sup> Hereafter, I shall use the terms 'abstract objects' and the 'Forms' interchangeably.

to be, in other words, a kind of a hierarchy of the relations between the Forms. So, for example, all the Forms seem to have the property of being self-identical and this brings them together under the Form of 'Sameness', and likewise, since 'Threeness' and 'Fiveness' have the property of being numerically odd they come together under the Form of 'Oddness'. Although the Forms stand in certain relation to each other, they are not identical;<sup>31</sup> each Form has a distinct nature which is not exhausted by its relational properties. Then the basic question, which the realist needs to answer, is: how are we to explain the ground and nature of these relations as well as distinctions between abstract objects? Why should they have relations to each other at all?

In what follows, I shall first pursue how an answer to these questions can be developed by postulating an eternal and universal mind along a line of thought which seems to have a perennial place in philosophy as it harks back to the ancient debate about the metaphysics of the Forms, embarked on by Plato himself and notably maintained by Plotinus.<sup>32</sup> Secondly, I shall consider how this might also provide an explanation for the epistemological problem of abstract objects.

Once the issue is the interconnectedness of abstract objects, as Gerson points out, it natural to think that there is a 'partial identity' between them such that it is a part the nature of, say, *F* to bear a relation to the nature of *G*, or *vice versa*. The partial analysis of each Form, in other words, necessarily *overlaps* the other Forms, and thus the relational properties of a Form turn out to be a part of its nature. Thus, considering that all the Forms are somehow interconnected and that there are Forms such as 'Sameness' from whose natures all the Forms partake, one way of explaining the interrelatedness of

---

<sup>31</sup> See Gerson (1990), pp. 54-55.

<sup>32</sup> I shall generally follow Gerson's interpretation of Plato and Plotinus on this issue, I shall therefore not get into the exegetical debate here.

the Forms is to view them as proper parts of one whole.<sup>33</sup> Following such a line of thought, Plato postulated a superordinate metaphysical principle, the Form of the Good, which not only accounts for the existence, truth and knowability of other Forms but also unifies them.<sup>34</sup> But, how exactly?

Given that each Form's being partially identical with the Form of the Good in terms of different aspects or attributes of the Good is difficult to conceive and also intolerable for Plato (as he would have found it difficult to identify Forms with attributes<sup>35</sup>), it is more promising to conceive of such an identification in terms of 'virtuality'. Thus, it might be suggested that the Form of the Good *virtually* contains all the rest of the Forms insofar as it is the cause of their existence and thus accommodates their effects.<sup>36</sup> Unfortunately, this too seems to come short. Even if we suppose that the Form of the Good *virtually* contains all the complexity of the other Forms in a simple variegated fashion, it is not clear how this is supposed to explain the interconnectedness of the Forms and how such an identification is to mark the distinct nature of each Form.<sup>37</sup>

Yet, given that the Forms depend upon the Form of the Good and are virtually identical with it, it has been argued that any cognitive association with the Forms would be different ways of associating with the Good.<sup>38</sup> And such an intellectual activity of associating with the Forms, it would be said, is the proper activity of the soul inasmuch as only an immaterial being like soul (which is extremely similar to the Forms) can have a cognitive association with the Forms, and in so doing,

---

<sup>33</sup> *Ibid.*, pp. 54-57.

<sup>34</sup> *Ibid.*, p. 57.

<sup>35</sup> *Ibid.*, p. 59.

<sup>36</sup> *Ibid.*, p. 61.

<sup>37</sup> *Ibid.*, p. 80.

<sup>38</sup> *Ibid.*, pp. 60-61.



... it appears that the relationship between that which knows and the Forms themselves is some sort of identity. ... [and] this suggests, roughly, that thinking and the Form that is thought are what the Good is when thinking occurs.<sup>39</sup>

But, then it might be said that

...the necessary interconnections of Forms become articulations of a simple nature [the Form of the Good] *qua* object of intellection.<sup>40</sup>

Thus, considering that the connections and distinctions between the Forms might therefore be conceived as something akin to 'conceptual connections and distinctions', according to Gerson, "Plato, in developing a defensible metaphysics of Forms, first posits a Form of the Good as an explanatory *archē* for Forms and then is led to considerations regarding mind"<sup>41</sup>.

Now, given that "Forms are interrelated distinct natures only as objects of thinking ... [and] the multiplicity of natures of Forms and their necessary relations are ontologically prior to temporally situated cognitive agents"<sup>42</sup> it would seem evident that the proposed task cannot be performed by imperfect minds such as ours. To solve this, Plato introduces a divine mind of a complex nature, *nous*, which is eternally engaged in perfect contemplation of all the Forms. Thus, in Plato's metaphysics of the Forms, while the Form of the Good is employed as the ontological ground of the other Forms; *nous* is hypothesized to explain their connections and distinctions.<sup>43</sup> Therefore,

---

<sup>39</sup> *Ibid.*, p. 67.

<sup>40</sup> *Ibid.*, p. 61.

<sup>41</sup> *Ibid.*, p. 63.

<sup>42</sup> *Ibid.*, pp. 68-69.

<sup>43</sup> *Ibid.*, pp. 68-71.

... the Form of the Good alone is not sufficient as *archē*. *Nous* is required as eternal contemplator of Forms by its eternal orientation to the finality of the Good.<sup>44</sup>

Thus, *nous* and the Form of the Good conjointly serve to guarantee the integrity of the other Forms.<sup>45</sup>

To sum up, therefore, even though the Forms derive their existence from the Form of the Good, such an ontological dependence does not supply the possibility of there being interconnected Forms of distinct natures. Considering that the relations and distinctions between Forms are better understood in terms of *conceptual* connections and distinctions, Plato seems to postulate an eternal mind, *nous*, which is eternally engaged in thinking the Forms. And the Form of the Good, as an *archē*, seems to eternally manifest the Forms and their interrelations to an eternal intellect seeking for the Good as a goal.<sup>46</sup> The very existence of the Forms together with their connections and distinctions, therefore, entails there being an eternal mind which is eternally (cognitively) identical with the Forms. Thus, "the multiplicity of Forms would neither be reduced to appearances nor obliterated by identification with the Good"<sup>47</sup>, they are identified with *nous* which has a complex nature and thus internalized to it in conceptual-like terms.<sup>48</sup>

The division of labour between the Form of the Good and *nous* seems to make it difficult to see whether or not, in Plato's view, the Forms are internal to *nous*. But, can it be the case that *nous* thinks the externally existing Forms and thus interconnects them? It was Plotinus who considered and rejected such a possibility:

---

<sup>44</sup> *Ibid.*, p. 230.

<sup>45</sup> *Ibid.*, p. 70.

<sup>46</sup> *Ibid.*, p. 63.

<sup>47</sup> *Ibid.*, p. 68.

<sup>48</sup> *Ibid.*, p. 70.

The 'link' among the Forms is *nous*, but not in the sense that the Forms are united because there is one eternal thinker of them. Rather they are identical with the *ousia* of *nous*. Unity is retained because *nous* is one; multiplicity among Forms, and duality between Forms and *nous* is retained because *nous* is simultaneously thinking all the distinct Forms; unity-in-multiplicity is established by the fact that *nous*'s thinking is self-thinking.<sup>49</sup>

Thus, Plotinus, according to Gerson, "not only makes explicit what ... is in the background in Plato, but goes well beyond"<sup>50</sup>. Essential to Plotinus' reasoning seems to be the idea that the Forms can be interconnected distinct natures only if they are identical with the nature of *nous*. For, according to Plotinus, were Forms external to *nous*, each Form would "be cut off from the others"<sup>51</sup> there would not be a unity in the realm of the Forms. To think that the Forms are not outside *nous* is therefore a necessary step for a proper understanding of the eternal interconnectedness of the Forms and this leads us to think that "[t]he Forms are not really distinct entities, but really distinct aspects of Intellect"<sup>52</sup>.

Moreover, the internalization of the Forms into *nous* not only is a necessary step for a proper understanding of the eternal interconnectedness of the Forms but also needed for guaranteeing eternal truth. Because, according to Plotinus, to suppose that the Forms are outside *nous* would cause well-known epistemological difficulties to surface: if the Forms are outside *nous*, how are we to account for *nous*' knowledge of the Forms? In order to guarantee eternal truth, *nous*' knowledge of the Forms must be infallible

---

<sup>49</sup> *Ibid.*, p. 196.

<sup>50</sup> *Ibid.*, p. 196. Elsewhere Gerson writes: "In Plato, the elements of Plotinian metaphysics are surely present - Forms, a divine mind, and a first principle above these called 'Good' or perhaps even 'One'. It must be confessed, however, that these elements are not well integrated in the dialogues" (1994, pp. 67-68).

<sup>51</sup> Plotinus (1966-88), V.5.1.

<sup>52</sup> Gerson (1994), p. 51.



(incorrigible), but if the Forms were external to *nous* this cannot be the case. For, if we suppose that they are external to *nous* we have to appeal to a perceptual/ representational account of knowledge and such knowledge cannot enjoy the epistemic privilege of being self-evidently true as it is mediated by certain intermediary representationalist metaphors such as images, pictures.<sup>53</sup> After all,

it is entirely obscure what it means for a picture to represent an immaterial entity ... and more importantly, if knowing is picturing, one must have a way of distinguishing between a true picture and a false one, between knowing and being deceived. But the only way to do this is to compare the picture with what it is a picture of. And if this is possible, one does not need the picture in the first place.<sup>54</sup>

On Plotinus' account, therefore, *nous* could never comprehend the real nature of the Forms if they were outside it because there would always have been an ontological gap between the cognizer and the objects of cognition, and this would have caused uncertainties in *nous*' knowledge of the Forms. And in this case, the *truth* found in *nous* would have been doubtful and imperfect,<sup>55</sup> or rather, Plotinus thinks, there would be no truth in *nous*, because "the real truth ... does not agree with something else, but with itself, and says nothing other than itself, but it is what it says and it says what it is"<sup>56</sup>.

If truth is a matter of self-accordance and the Forms were external to *nous*, then there would not be truth in *nous*, however, "if there is not truth in Intellect... then truth will not be anywhere else either"<sup>57</sup>. But, granted that

---

<sup>53</sup> Plotinus *op. cit.*, V.5.1; Gerson (1990), p. 197.

<sup>54</sup> Gerson (1990), p. 197.

<sup>55</sup> Plotinus, *op. cit.*, V.5.2.

<sup>56</sup> *Ibid.*, V.5.2.

<sup>57</sup> *Ibid.*, V.5.2.

there are eternal truths, Plotinus asks us to think that *nous*' knowledge of the Forms must be self-evident and this can occur only when *nous* is directly acquainted with the Forms in terms of self-knowledge where *nous*' knowledge of them is nothing other than the knowledge of its own mental states where the thinker and the objects of thought are the same.<sup>58</sup>

In sum, Plotinus seems to put forward two distinct arguments for the internalization of the Forms into *nous*. The first argument is put forward on the grounds that the Forms can be interconnected only if they are somehow identical with the nature of *nous*. In Plato, we have seen, a division of labour was made between the Form of the Good and *nous* to guarantee the integrity (the interconnectedness) of the other Forms. Thus, while the Form of the Good is virtually identical with the other Forms, it is *nous* which explains the complexity of the Forms as interconnected distinct objects. It is difficult to understand such a division of labour. Given that *nous* does not somehow create the Forms as interconnected objects by thinking the Form of the Good, then, how are we to understand its function of interconnecting the Forms? Can *nous* interconnect them as they exist outside it?

It is hard to think how *nous* could interconnect the Forms if they were external to it, and even harder when *nous* is considered to be mental and the Forms to be abstract in nature. Or else, one has to think that *nous* interconnects the Forms, not at the level of reference, but at the level of representation, but this would indicate that the relations between the Forms are inessential and thus somehow irrelevant to them as they would have been superadded or imposed upon them. To think that *nous* interconnects the Forms at the level of representation, therefore, will invoke a non-realist conception of the *relations* among the Forms and this would clearly undermine the realist view of necessary truths which presumes that the Forms have their relations essentially. However, if we think that the Forms are interconnected as they

---

<sup>58</sup> Gerson (1990), p. 198, and (1994), p. 55.

are somehow identical with the nature of *nous*, then we might think that they have their relations essentially. If so, it seems plausible to think that the interconnectedness of the Forms is better conceived if they are in one way or another identical with the nature of such a mind.

Plotinus' second argument is put forward on the grounds of 'eternal truth' and, in this connection, he makes two distinct claims about the nature of 'truth': (i) truth cannot exist without Intellect, and (ii) truth is a matter of self-accordance. To start with (i), Plotinus argues that "if Forms exist, eternal truth exists. But truth is being for or in relation to an Intellect. Hence eternal truth entails an eternal Intellect"<sup>59</sup>. However, what is the exact relation between the Forms, Truth and Intellect? Why should they entail each other?

One reason why 'eternal truth' entails an eternal Intellect seems to be the idea that "what causes the truth of such propositions is an eternal state of affairs"<sup>60</sup> involves both the *existence* of the Forms and their necessary *interconnectedness*. Therefore, both the Forms and their interrelations are eternal and ontologically on the same par. That is, since the eternal 'link' or 'partial identity' of two Forms, say *F-ness* and *G-ness*, is explained in terms of being grounded in a reality (*nous*) which can at the same time be (partially) identified with both *F-ness* and *G-ness*, then such a reality must be equally eternal. The eternality of the Forms thus entails the eternal coexistence of *nous* due to their *interconnectedness*. Thus, for example, the proposition *all fathers are male* is eternally true because the Form of Father and the Form of Male are eternally connected to the extent that one cannot imagine a time when the Form of Father and the Form of Male existed disconnected.<sup>61</sup>

---

<sup>59</sup> Gerson (1994), p. 48.

<sup>60</sup> Gerson (1990), 196.

<sup>61</sup> Gerson (1994), pp. 48-49; and Gerson (1990), p. 197. In a similar fashion, Leibniz argued that "God not only sees individual monads and the modifications of every monad whatsoever, but he also sees their relations and in this consists the reality of relations and of truth" (1989, p. 199).



Similarly, we might say, there was no time when the Form of Father and the Form of Male were interconnected and the proposition that *all fathers are male* was false.

Apart from these considerations, Plotinus thinks that the very seat of 'truth' can be nowhere but Intellect because 'truth is being for or in relation to an Intellect'. One might take this to mean that there cannot be truths without there being certain intellectual activities such as thinking, believing and judging.<sup>62</sup> And one way to understand this is to think that truth consists in the relation of the correspondence of a cognition (a truth-bearer) with a fact or state of affairs. However, we have already seen that, according to Plotinus, truth is a matter of self-accordance; indeed this is an important reason for him to reinforce his basic claim that the Forms are not outside *nous*. Thus, Plotinus seems to think that 'truth' cannot consist in the relation of correspondence if the two terms of such a relation are distinct, that is, if the reality which makes a cognition true is, so to speak, an extra-mental reality. At this point, the parallelism between Plotinus' thought and Frege's following remarks might seem striking:

A correspondence ... can only be perfect if the corresponding things coincide and are, therefore, not distinct things at all. ...It would only be possible to compare an idea with a thing if the thing were an idea too. ... But this is not at all what is wanted when truth is defined as the correspondence of an idea with something real. For it is absolutely essential that the reality be distinct from the idea. But then there can be no complete correspondence, no complete truth. So nothing at all would be true; for what is only half true is untrue. Truth cannot tolerate a more or less.<sup>63</sup>

---

<sup>62</sup> See Plantinga (1982), p. 68.

<sup>63</sup> (1956), pp. 18-19. Also, there is a similarity between Leibniz and Frege's anti-semantical considerations on the concept of truth. See Adams (1994), p. 69.

There can be many questions which might be raised in this context. Thus, for example, if what makes a cognition true is not an extra-mental reality, then what is it? It might true that there cannot be a full correspondence between, in Frege's words, an idea and something real, does it then follow that 'truth' is not independent of our noetic activities and thus that the reality distinct from our ideas has no bearing on the truth of our cognitions?

On the correspondence theory of truth, a cognition (belief, proposition or whatever) is true if and only if there is a fact (or a state of affairs) to which it corresponds. Since the 'correspondence' is usually explicated in terms of 'structural isomorphism' between truth-bearers and facts, the pivotal task of the defender of the correspondence view is to give a specification of each term of the relation independently in order to show that both terms share the same structure.<sup>64</sup> Such an enterprise, however, is often argued to end in frustration inasmuch as any attempt to compare a belief with an outside fact results in a circularity; that is, it is not possible for one to get beyond the circle of her beliefs to show that things are in the way she believes and thus the gap between mental and non-mental reality can never be transcended.

Nevertheless, Davidson has recently argued that this objection is not cogent particularly because it is raised against the background assumption that truth is somehow an epistemic concept whereas, he maintains, it is always open to the correspondence theorist to hold that truth is "indepedent of our beliefs or our ability to learn the truth"<sup>65</sup>. Even though this might be accurate, it will not help us with the question of elucidating the 'correspondence' relation, and much of the difficulty consists in providing an independent account of the very nature of things to which true beliefs are supposed to correspond. Presumably, therefore, Davidson maintains that the

---

<sup>64</sup> See Johnson (1992), p. 45.

<sup>65</sup> Davidson (1990), pp. 302-303.

real problem with the correspondence theory "is that there is nothing interesting or instructive to which true sentences might correspond"<sup>66</sup>.

It is *facts* which are often considered to make our beliefs true. The very nature of facts, however, is rather vague mostly because it is not immediately clear whether they are to be considered within the objective furniture of extra-mental reality (the world) or be somehow identified with certain mind-dependent entities. Consider, for example, the relation of *the fact that there are books on the shelf* to the physical objects *books* and *shelf*. It is not clear whether *the fact that there are books on the shelf* itself, like physical objects such as *books* and *shelf*, is a part of the world, and thus it is unclear whether facts can be reduced to ordinary physical objects and *vice versa*.<sup>67</sup> There might be good reasons for thinking that physical objects such as books, shelves, tables etc., belong to the furniture of the world, but what reasons might one have for thinking facts too belong to the world? Facts, on the one hand, seem to supervene upon outside physical objects, on the other hand, seem to be structured in a very similar way in which true beliefs are structured. Thus, with Johnson, one might rightly ask, "[t]he belief is structured mentally by the believer, but what structures a fact?"<sup>68</sup>.

The resemblance between the structure of facts and that of true beliefs (thoughts or propositions) has led some philosophers to hold to what is sometimes called 'identity-theory' according to which, facts are identical with true beliefs.<sup>69</sup> However, considering that such a line of thought would undermine the whole idea of correspondence, it has been argued<sup>70</sup> that facts are to be altogether eliminated in the formulations of the correspondence view of truth; instead, one should take bare independent *an sich* reality to be

---

<sup>66</sup> *Ibid.*, p. 303.

<sup>67</sup> See Bonjour (1985), p. 166, and Johnson (1992), pp. 45-46.

<sup>68</sup> (1992), p. 45.

<sup>69</sup> For a criticism of the identity theory of truth, see Kirkham (1992), pp. 138-139.

<sup>70</sup> See Bonjour, (1985), pp. 166-167.



what makes our cognitions true. Accordingly, "a proposition corresponds to an *sich* reality if it refers to a particular which does exist and attributes to that particular either existence itself or else some specific property that it actually has (and analogously for relational properties)"<sup>71</sup>.

Such a line of thought, it might be said, relies for its truth on the supposition that external objects together with their properties and relations have a mind-independent reality in the world and that they are epistemically accessible to us. Therefore, it seems to be open to a sceptical challenge, however I shall not pursue them here. Instead, I shall suppose that such an explanation is indeed tenable to the extent that it can be backed up by inductive evidence to show that concrete objects as well as their properties and relations can enter into a causal relation to make our cognitions true. Moreover, with Bealer<sup>72</sup>, I shall assume that a condition (a state of affairs or a fact) can be built up from the properties, relations (qualities and connections) instantiated by the actual objects.

Even so, however, it should be evident that such an account can only be appropriate for the properties and relations of physical objects which exist in space-time and which might be said to enter into a causal relation. Thus, even if we think that the correspondence view of truth, in the way described thus far, can be vindicated from the aforementioned difficulties, there are good reasons for thinking it has to be confined to the 'truths' of phenomenal, spatio-temporal reality, viz. contingent truths.<sup>73</sup> One can therefore find good reasons for thinking that such a theory can at best be adequate for the truths about the actual instances of abstract objects (the Forms) which exist in space-

---

<sup>71</sup> *Ibid.*, p. 167.

<sup>72</sup> (1982), pp. 177-204.

<sup>73</sup> Cf. Bonjour (1985), p. 167. Similarly, Kirkham argues that 'facts' can enter into causal relations. See, *op. cit.*, 138.

time, but not for the truths about abstract objects *per se*.<sup>74</sup> Therefore, since the Forms are causally inert thought of existing independent of *nous*, its knowledge of them cannot be sense-perceptual.

However, if we think that the Forms are somehow internal to *nous*, there might be good reasons for thinking that a causal relation can take place between *nous* as cognizer and the Forms as the objects of its cognition. And this can be backed up by the view that a semantic externalism of mental content might not enjoy the epistemic transparency of the introspective self-knowledge or incorrigible mental contents (beliefs).<sup>75</sup> And it is at this point where, I think, the idea that truth is a matter of self-accordance seems to manifest its strength.

Now, if the Forms are identical with the nature of *nous*, then, in thinking them *nous* thinks nothing other than itself where, so to speak, both terms of the correspondence relation become somehow identical. In Frege's words, this is a 'perfect correspondence' which seems to be the core of Plotinus' thesis that truth is a matter of self-accordance where it "does not agree with something else, but with itself, and says nothing other than itself, but it is what it says and it says what it is"<sup>76</sup> Thus, the truth of a necessary proposition is to be explicated in terms of identity<sup>77</sup> in the sense that divine thoughts become cognitively identical with the very facts which make them true.

Aristotle entertained similar considerations when he said that "...the divine thought and its object will be the same, i.e. thinking will be one with

---

<sup>74</sup> Here we shall not get into the debate whether the Form of the Good (the One) can be somehow causally responsible for *nous*' knowledge of abstract objects.

<sup>75</sup> For a discussion of semantic externalism and the transparency of introspective self-knowledge, see Boghossian (1994).

<sup>76</sup> Plotinus, *op. cit.*, V.5.2.

<sup>77</sup> For a general defence of the (Fregean) identity theory of truth which identifies facts with true thoughts, see Hornsby (1997).

the object of its thought"<sup>78</sup> even though he held that the divine self-thinking is not tantamount to thinking of the Forms but thinking thinking.<sup>79</sup> Plotinus is in agreement with Aristotle in thinking that *nous* is identical with the objects of its cognition save the difference that he holds that *nous*, in thinking itself, thinks the Forms and therefore that there is a distinction between *nous* and its objects of cognition, i.e., the Forms.<sup>80</sup> More precisely, "the thinker as subject and the thinker as object must contain ...[a] duality, that is, they must be distinguished yet identical"<sup>81</sup>.

Presumably, it is the existence of such a duality which, one might say, enables us to understand the contention that 'truth is a matter of self-accordance' and that it is in relation to an Intellect. And it seems to me that Plotinus is basically right in maintaining that there must be a distinction between *nous* and the Forms in that even though *nous* is eternally cognitively identical with the objects of its cognition. For, although we might think that it cannot be the case that *nous* thinks that *p* without at the same time recognizing that *p* is the case<sup>82</sup>, nevertheless *nous*' thinking that *p* must be logically distinct from the state of affairs designated by *p*.

But, what is the exact relation between *nous* and the objects of its cognition, i.e., the Forms? Plotinus seems to think that the Forms are identical with *nous*. The crucial idea operating here is that of the relation of identity. There does not seem to be a particular difficulty in understanding this claim if by this is meant that the thinker and the objects of thought are co-present in

---

<sup>78</sup> Aristotle (1941a), 1075a1-5.

<sup>79</sup> Gerson (1990), p.137. Crucial to Aristotle's reasoning is that the divine thought should not depend on something other than itself as this would imply potency and imperfection in divine knowledge. See Aristotle, *op. cit.*, 1074b15-35.

<sup>80</sup> See Gerson (1990), pp. 193-194; and (1994), pp. 50-53.

<sup>81</sup> Gerson (1994), p. 54.

<sup>82</sup> Cf. Hornsby, *op. cit.*, p. 6.



the same subject; but, if that is not what is in mind, how are we to understand the claim that *nous* is identical with the Forms?

This turns out to be a rather obscure and troublesome point in Plotinus' account and thus, for example, he might be taken to be saying that each Form (intelligible) is an individual intellect where *nous* is a multiplicity of these thinkers,<sup>83</sup> or that every intellect is *cognitively* identical with all the Forms, *nous* is what all particular intellects commonly have.<sup>84</sup> However, I shall not get into this debate as it might carry us beyond the scope of our interest.<sup>85</sup>

Nevertheless, it seems to me rather intuitive to think that *the Forms* are in fact *Ideas* in *nous*, where each Form is identical with a distinct *Idea*. The interconnectedness of the Forms can still be retained because they would be ideas in the same mind which has them by its very nature. The ontological status of the Forms, it might be said, would also be maintained since they are *uniquely* identified with the *Ideas* in *nous*.<sup>86</sup> However, the ontological status of the Forms is related to the ontological status of such a mind. What kind of a being must such a mind be in order to retain the ontological status enjoyed by abstract objects and necessary truths?

Our considerations about *nous* in a historical context so far seem to have, in a tentative manner, shown that, in order to explain the interconnectedness of the Forms and therefore eternal truths, there must exist an eternal mind which is the seat of the Forms and which thinks them eternally.<sup>87</sup> Such a mind, in order to be able to perform such a paradigmatic

---

<sup>83</sup> See Gerson (1990), p. 198, O'Meara *op.cit.*, p. 37.

<sup>84</sup> Gerson (1994), pp. 55-57.

<sup>85</sup> For this debate, see Gerson (1990), p. 198; Gerson (1994), p. 55; O'Meara, *op. cit.*, p. 37.

<sup>86</sup> Cf. Gerson (1990), p. 70.

<sup>87</sup> According to Gerson, although Plotinus thinks there must exist at least one intellect to guarantee eternal truth "no one particular intellect is the guarantor" (1994, pp. 55-56). However, given the assumption that abstract objects can be interconnected distinct natures

task, as seen, must be *eternal*. This is true insofar as it is hard to imagine a time when abstract objects and necessary truths did not exist. By the same token, evidently such a mind has to be *necessary* since abstract objects are necessary beings, and thus could not have failed to exist. And finally, to guarantee necessary truths, we should think that such a mind, unlike ours, has to be *omniscient* with respect to recognizing abstract objects, that is, with respect to its own nature.

Granted that only a mind with these qualifications can be the seat of abstract objects and necessary truths it is a question whether *nous* in the way characterised thus far can meet these conditions. The fundamental reason for hesitating is that *nous* is not the ultimate being but subordinate to the *archē*, that is, it is secondary to the Form of the Good or the One. Thus, in Plato<sup>88</sup>, a division of labour is drawn in between the ultimate *archē* and *nous*; while the Form of the Good accounts for the ontological ground of Forms; *nous* is hypothesized to explain the interrelations and distinctions between Forms in conceptualistic terms. Correspondingly, in Plotinus, even though eternal truths cannot be identified with the One because of the complexity of eternal truth and the absolute simplicity of the One, nonetheless, what is ultimately responsible for the existence of eternal truths is the causal activity of the One.<sup>89</sup>

What seems to be problematic, explicitly in the case of Plotinus, is the instrumentality of *nous* in that it is somehow generated (emanated) or caused to exist as the device of the One as an eternal cognizer<sup>90</sup> of the Forms to guarantee eternal truths. However, aside from the fact that it is difficult make sense of the Plotinian contention that *nous* owes its existence to the One and its

---

only if they are identified with the ideas or nature of the same mind, there are good reasons for thinking that there must exist one intellect rather than many.

<sup>88</sup> Gerson, (1990), p. 71.

<sup>89</sup> Gerson (1994), p. 65-65.

<sup>90</sup> *Ibid.*, p. 46.

nature to itself,<sup>91</sup> the real difficulty is that it is hard to conceive how abstract objects, which exist necessarily, can depend on such a derivative being.<sup>92</sup> On the face of it, if *nous* is created or somehow caused to exist, it would then follow that abstract objects and necessary truths too are created or caused to exist and this seems to be in a plain contradiction with our ontological and modal intuitions about abstract objects and necessary truths.

The difficulty with the ontological derivativeness of *nous*, it might be said, is a problem stemming from the ancient considerations about the ultimate *archē*. In a very similar way to the doctrine of divine simplicity, the ultimate being, *archē*, is considered to be devoid of any nature.<sup>93</sup> However, once these considerations are set aside there seems to remain no reason why an *ultimate, necessary* mind should not be sufficient to substitute both the *archē* (the Form of the Good or the One) and *nous*.

It is therefore my contention that our considerations regarding a universal mind and conceptualism so far can reasonably be wedded to a traditional theistic conception of God, who is necessary, ultimate and, as omniscient, free from all epistemic restrictions. This not only would circumvent the problems facing *nous*, but also provide a far more simple explanation for the phenomenon of abstract objects and necessary truths. Thus if we consider that God has the Forms are Ideas (or Concepts) in his mind by his nature, and he, as a part of his nature, thinks them eternally and necessarily, following Ockham's razor, there remains no reason to postulate an *archē* as the ultimate ground of being, plus an eternal mind; only one being, God, suffices to function as the ultimate source of being and as an eternal mind. Let us designate this view as "Divine Conceptualism".

---

<sup>91</sup> Gerson (1990), p. 221.

<sup>92</sup> Cf. Peterson (1995), p. 356. I shall return to the issue whether necessary can be created in the following two chapters.

<sup>93</sup> See Gerson (1990), pp. 57-58.



Thus, the divine conceptualist can rightly maintain that the paradigmatic status of the Forms and of such an eternal mind in terms of having necessary existence can be retained if we think that God is a necessary being and has these ideas in his mind by his very nature. In so doing, the divine conceptualist would reject the troublesome doctrine of divine simplicity<sup>94</sup> as false and repudiate the idea that God is absolutely simple in that he does not have concepts or that there are no distinctions between his attributes. The rejection of such a doctrine would thus enable the divine conceptualist to remove the existence of an intermediary being such as *nous* between the *archē* (or God) and the multiplicity of the Forms and the complexity of necessary truth.

Having identified the Forms with ideas or concepts in the mind of God, the divine conceptualist can identify necessary truths with necessary God's thoughts<sup>95</sup> whose truth is answerable to the facts about his concepts. Thus, one might say, necessary truths are divine conceptual truths in the sense that the truth and necessity of these propositions are answered to God's concepts and their intrinsic properties and the relations obtaining between them.

Thus, necessary truths, on the divine conceptualist account, arise out of God's self-thinking. And since God is essentially what he is and has these ideas in his mind by his very nature, his concepts are essentially as they are, that is, they have their intrinsic properties and relations necessarily. On the other hand, since God is essentially omniscient, he is *necessarily* and *eternally* engaged in thinking the ideas in his mind, the actuality of his nature is only *logically* prior to his thinking.

---

<sup>94</sup> This doctrine has recently been subject to decisive objections, for such a controversy, see Plantinga (1980); Mann (1982), Morris (1985); Stump and Kretzmann (1985); Hughes C. (1989); Leftow (1990a); Wolterstorff (1991); Vanicella (1992); Miller (1994).

<sup>95</sup> Cf. Morris and Menzel (1986), p. 355.

On the divine conceptualist account, therefore, all abstract objects are in fact ideas (concepts) and necessary truths are thoughts in the mind of God. However, unlike the human concepts and thoughts which are grasped from an outside realm (i.e., from the divine mind) which exist independently from human graspings, the divine concepts are the very abstract objects (the Forms) and the divine thoughts are the very propositions.<sup>96</sup> That is to say, the divine concepts and thoughts, unlike the human concepts and thoughts, are non-relational in the sense that God does not grasp them via being intentionally directed to certain objects and states of affairs existing apart from himself.<sup>97</sup> To mark the distinction between the identification of the divine and the human concepts/ thoughts with abstract objects/ necessary truths, we might think that the divine concepts/ thoughts are eternally, necessarily and directly identical with abstract objects and necessary truths, whereas the human concepts/ thoughts are temporarily, contingently and indirectly express them by their cognitive associations with God's concepts and thoughts.<sup>98</sup>

The hypothesis of divine conceptualism also sheds light on the epistemological problem of necessary truths. One of the basic motivations behind the repudiation of realism, as we have seen, has been that it is somehow unable to explain our knowledge of necessary truths. In fact, such a difficulty is not a problem just for realism, it has been an enduring issue for almost every philosophical school to explain our (*a priori*) knowledge of truths of logic and mathematics. The difficulty is stated almost on every occasion when the issue is necessary truths: how can we possibly have an

---

<sup>96</sup> See *ibid.*, p. 355.

<sup>97</sup> See Loux (1986), pp. 498-501.

<sup>98</sup> For Plato, what distinguishes *nous* from all the other intellects such as ours is the fact that while the Forms can only be (cognitively) identified with *nous*, it is the nature of the Forms which is multiply present as numerically distinct concepts in other intellects. See Gerson, (1990), p. 70.

epistemic faculty which might account for our knowledge of abstract objects and necessary truths? One way to answer this question, to be sure, is to say with the realist that reason has a faculty for *a priori* knowledge, but we have seen that this cannot be a satisfactory answer unless it is shown how the relation between reason and abstract objects can obtain and thus how reason can be endowed with such an *innate* capacity.

The divine conceptualist's answer to this problem, however, can be really attractive: given that abstract objects are to be identified with God's concepts and that God is a causal power, our knowledge of abstract objects and necessary truths can be considered as an outcome of God's action on us. Thus, after all, as Plantinga points out,<sup>99</sup> the causal requirement can be met: if a causal relation can be said to hold between God and abstract objects in terms of a thinker and his ideas, then "we can enter into a causal relation with them by virtue of our causal relation to God"<sup>100</sup>. God's action (causal relation) on us in this respect could be understood in different ways: one can suppose that God created us with an innate (*a priori*) capacity to know necessary truths and also one can take this to be a matter of continuous divine illumination.<sup>101</sup>

By contrast, abstract objects are causally ineffective if conceived as existing independent of a causal agent, and therefore it is hard to see how they could have their actual instances without being caused by something else. With Frege, one might rightly think that the effects of abstract objects can only be "brought about by an act of the thinker without which they would be ineffective"<sup>102</sup>. However, contingent thinkers like ourselves can hardly be responsible for bringing about *all* the effects of abstract objects. For one thing, it is conceivable (logically possible) that abstract objects are

---

<sup>99</sup> (1993), p. 121.

<sup>100</sup> *Ibid.*, p. 121.

<sup>101</sup> Adams (1983), pp. 51-52.

<sup>102</sup> (1956), p. 38.



instantiated without there being contingent thinkers. *Prima facie*, there are uncountably large numbers of the Forms, the Form of Man included, instantiated in the natural world. Yet, it is conceivable that; for example, the Form of Man exists eternally without there being an actual man; and considering that it cannot be the Form of Man which, as a matter of fact, caused the actual existence of human beings, we might rightly think that there must be a causal agent responsible for their actual existence. Indeed given that the God of theism is also a "creator", the divine conceptualist might consistently hold that such a causal agent is God who brings about the causal effects of abstract objects and this explains why abstract objects have their instances in the actual world *via* his creative power.

Having the above considerations in mind, it seems to me rather attractive to maintain that the realist ontology of abstract objects is best understood as ideas in the mind of God and therefore that divine conceptualism is the most advantageous account of necessary truths so far. Divine conceptualism both retains the advantages of a conceptualist line of thought developed *via nous* and avoids the problems facing *nous* by identifying the Forms with the ideas (concepts) in the mind of God. Thus, the paradigmatic status of the Forms and necessary truths is maintained inasmuch as they are identified with the concepts and thoughts of an ultimate and necessary being; and the interconnectedness of the Forms is explained in terms of being the different interrelated concepts in the same mind (God's mind); and finally, necessary truths are guaranteed because God is omniscient.

Divine conceptualism thus not only gives an explanation for God's relation to abstract objects but also for our knowledge of abstract objects since God is a causal power and therefore can be causally effective on us in this respect. Also, by identifying abstract objects with ideas in the mind of God who is a causal power at the same time, divine conceptualism answers the question

of how causally inert abstract objects might have their effects in the actual world.

There is more to be said about divine conceptualism and I shall return to this in the final chapter, but before that it is necessary to examine two other accounts which also relate necessary truths to God.

**CHAPTER FIVE**  
**CREATIONISM: THE CARTESIAN VOLUNTARISM**



## 5. CREATIONISM: THE CARTESIAN VOLUNTARISM

In the previous chapters, we have seen that there is no way to account for necessary truths in a reductive manner, therefore we have granted that the reference of necessary truths is the ontology of abstract objects which exist necessarily and have their properties and relations necessarily. To overcome certain problems facing this ontology, however, we have also seen, in a tentative spirit, that there are good reasons for thinking that this ontology is to be identified with the mental contents of an eternal mind.

In this connection, we have seen that *nous* cannot retain the paradigmatic ontological status of abstract objects because it is somehow created or caused to exist. Thus I have argued that since abstract objects together with their properties and relations exist necessarily and therefore cannot depend upon something such as *nous* which is somehow ontologically derivative, they are best conceived as the ideas in the mind of God who is a necessary being. In so doing, however, one does not commit herself to the idea that abstract objects and necessary truths somehow could have failed to exist or could have been otherwise; accordingly, by identifying such an ontology with God's mental contents, one does no harm to the ontological and modal properties of abstract objects and necessary truths.

God's relation to abstract objects and necessary truths seems to call the scope and limits of the divine power into question. Thus, it might be asked, if God is truly -unrestrictedly- omnipotent, can he change the ontological and modal properties of abstract objects and necessary truths? If he can, how after all can there be necessary truths, or in which sense one might call them *necessary*? If he cannot, is not "divine omnipotence" somehow restricted in

this respect? The question, to be sure, is reminiscent of the *Euthyphro* dilemma.<sup>1</sup> Thus, one might wonder, whether necessary truths are necessary because God wishes them so of his free choice, or are they necessary anyway such that even he cannot make or could not have made them otherwise.

Having identified the realist ontology of abstract objects with God's mental contents (divine ideas) we seem to have already rejected the first horn of the dilemma which leads one to account for the existence of abstract objects and necessary truths in terms of the divine will. For, such a voluntarism would entail that God would have power over the ontological and modal properties of abstract objects and therefore of necessary truths such that, if he wishes, abstract objects would no longer be necessary beings or have their intrinsic and relational properties, and the truths about them would no longer be necessary. This, to be sure, contradicts our intuitions about the realistic picture of necessary truths which make reference to the ontology of abstract objects and their properties and relations, and therefore we have to think that God cannot be responsible for the ontological and modal properties of abstract objects in terms of his will. To strengthen this intuition, in this chapter, I shall critically examine the Cartesian doctrine of the creation of eternal truths. Thus, I shall first give a detailed exposition of the Cartesian doctrine and then argue that there are good reasons for rejecting such a view as it leads us to some unacceptable consequences.

---

<sup>1</sup> The core of the *Euthyphro* dilemma is this: are moral truths/actions obligatory because God wishes them so of his free choice, or does God wishes them so because they are obligatory anyway, i.e., independently true of God. If the theist takes the first horn of the dilemma, he seems to face a difficulty such that what is morally right and wrong is just God's arbitrary choice, hence he could have made what is morally good, bad; and also what is morally bad, good. If he takes the second horn of the dilemma he seems to infringe upon God's sovereignty, because what is morally right or wrong would be independently true of God. They would be true in themselves. See Swinburne (1974), pp. 120-121.

## 5.1 The Cartesian Argument: an Overview

Descartes clearly entertains the view that necessary truths depend upon God for their existence, since, according to him, it would be mistaken to think "...that *if God did not exist nonetheless these truths would be true*, for the existence of God is the first and the most eternal of all possible truths and the one from which alone all others derive"<sup>2</sup>. Therefore, for Descartes, the counterfactual that

(A) If God did not exist, there would be no necessary truths

is (necessarily) true. Divine existence therefore is the very ground of all necessary (eternal) truths; however, they are distinct from God's essence, and thus, not identical with the divine mind or somehow subsumed in *being God*. On the contrary, God is creatively responsible for the existence of necessary truths inasmuch as he is responsible for the rest of created beings:

The mathematical truths which you call eternal have been laid down by God and depend on Him entirely no less than the rest of his creatures. Indeed to say that these truths are independent of God is to talk of Him as if He were Jupiter or Saturn and to subject Him to the Styx and Fates. Please do not hesitate to assert and proclaim everywhere that it is God who has laid down these laws in nature just as a king lays down laws in his kingdom. .... It will be said that if God has established these truths He could change them as a king changes his laws. To this the answer is: 'Yes he can, if his will can change.' 'But I understand them to be eternal and unchangeable.' - 'I make the same judgement about God.' 'But His will is free.' - 'Yes, but his power is incomprehensible.'<sup>3</sup>

---

<sup>2</sup> (1970), p. 14.

<sup>3</sup> *Ibid.*, pp. 11-12.



Although Descartes here mentions only mathematical truths as the paradigmatic necessary truths, as Plantinga points out,<sup>4</sup> referring to his statements that God "...is no less the author of creatures' essence than he is of their existence; and this essence is nothing other than the eternal truths"<sup>5</sup> one can rightly extend this account to the host of all abstract objects. Thus, one might even think that Descartes entertained the view that necessary truths reflect the properties and relations of abstract objects but thought that they are to be considered within the limits of creation. Therefore, God is causally responsible for the existence of eternal truths: "You ask me by what kind of causality God established the eternal truths. I reply: by the same kind of causality as he created all things, that is to say, as their efficient and total cause"<sup>6</sup>. And in so doing, God was in no way determined, therefore he was absolutely free in respect of creating eternal truths:

You ask also what necessitated God to create these truths; and I reply that just as he was free not to create the world, so he was no less free to make it untrue that all lines drawn from the centre of a circle to its circumference are equal. And it is certain that these truths are no more necessarily attached to his essence than other creatures are. You ask what God did in order to produce them. I reply that *from all eternity he willed and understood them to be, and by that very fact he created them*. Or, if you reserve the word created for the existence of things, then he *established them and made them*. In God, willing, understanding, and creating are all the same thing without one being prior to the other even *conceptually*.<sup>7</sup>

Thus, it should be evident that from what Descartes says that it is God's free will which determines the establishment of eternal truths; in other

---

<sup>4</sup> (1980), p. 98.

<sup>5</sup> (1970), p. 14.

<sup>6</sup> *Ibid.*, p. 14.

<sup>7</sup> *Ibid.*, p. 15.

words, it is the divine will which makes  $p$  true or necessarily true. Since, he maintains

...even if God has willed that some truths should be necessary, this does not mean that he willed them necessarily; for it is one thing to will that they be necessary, and quite another to will them necessarily, to be necessitated to will them.<sup>8</sup>

On the other hand, since for God knowing and willing are all one and the same thing, Descartes obviously employs the traditional doctrine of divine simplicity, according to which God has no parts or components whatsoever<sup>9</sup> and concludes that God's willing from all eternity that  $2 + 2 = 4$  is equivalent to his knowing that  $2 + 2 = 4$  is true as well as to his creating  $2 + 2 = 4$ . In fact, it has been argued<sup>10</sup> that this is a crucial point in Descartes' argument, in that there were no possibilities *prior to* God's creative act. Since God's willing, knowing and creating are one and the same thing, there was no realm or set of possibilities *prior to* creation, from which God chose what he wanted to actualise. But in any case,

(B) For any necessary proposition  $p$ , it is God's will which makes  $p$  a necessary truth; therefore,  $p$  is a necessary truth if and only if God wishes  $p$  to be a necessary truth.

---

<sup>8</sup> *Ibid.*, p. 151.

<sup>9</sup> To be sure, it is difficult to see how God's understanding, knowing and willing could be one and the same thing. But, as seen, according to Descartes one cannot envisage any distinction between God's knowledge and his act of creation. In fact, although this seems to be a natural consequence of the doctrine of "divine simplicity", one should note that the scholastic philosophers, despite their approval of this doctrine, still have made a distinction between God's knowing and his creating, or between the divine understanding and the divine will. See Frankfurt (1977), p. 40.

<sup>10</sup> See, for example, La Croix (1984), p. 467.

Thus, it is/ was perfectly within God's power to make it true that  $2 + 2 = 5$ , or to make the law of contradiction false;<sup>11</sup> but, according to Descartes, it is futile to ask how God could have done so; and this is basically because of the fact that our mind is finite, hence incapable of conceiving God's infinite power:

I turn to the difficulty of conceiving how it was free and indifferent for God to make it not be true that the three angles of a triangle were equal to right angles, or in general that contradictories cannot be true together. It is easy to dispel this difficulty by considering that the power of God cannot have any limits, and that our mind is finite and so created as to be able to conceive as possible things which God has wished to be in fact possible, but not to be able to conceive as possible things which God could have made possible, but which he has in fact wished to make impossible. The first consideration shows us that God cannot have been determined to make it true that contradictories cannot be true together, and therefore that he could have done the opposite. The second consideration shows us that even if this be true, we should not try to comprehend it since our nature is incapable of doing so.<sup>12</sup>

In sum, therefore, absolutely everything distinct from God is created, and therefore even if we think that the reference of necessary truths, for Descartes, is the ontology of abstract objects, such an ontology itself falls within the limits of creation. However, to say that  $x$  is created immediately seems to entail that (i)  $x$  could have failed to exist, (ii)  $x$  could have been otherwise. And if so, it is/ was within the divine freedom to have made such

---

<sup>11</sup> In dealing with this question, the scholastic philosophers have generally held the view that necessary truths -truths of logic and mathematics- set the limits of divine power. Therefore, God has the power to make  $p$ , if and only if  $p$  is logically possible. However, on this account, while necessary truths and objects were conceived to depend on God for their ontological and modal characters, "voluntarism" was clearly rejected. Thus, in relating abstract objects and necessary truths to God in terms of dependence, the scholastic philosophers such as Aquinas conceived them to be comprised in the divine essence; while Augustine thought that they are "divine ideas". See Kenny (1979), pp. 19-25.

<sup>12</sup> (1970), pp. 150-151.



that there are no abstract objects or that they exist with different properties and relations. Thus God could have made it such that there are no necessary truths as it is/ was within his power to make any necessary truth  $p$  false, and its negation  $\text{non-}p$  true. But can we make sense of the creation of something whose ontological and modal properties are essential, that is, where it is impossible for us to conceive how they could have failed to exist, or could have been otherwise?

## 5.2 Universal and Limited Possibilism

If necessary truths are created, however, does it follow that, on Descartes' account, there are no necessary truths? This is a controversial issue and it has been a matter of considerable exegetical debate. Some writers such as Frankfurt<sup>13</sup> and Plantinga<sup>14</sup> favour identifying the Cartesian position with the view which denies that there are any necessary truths; every proposition is, in the final analysis, contingently true or false. In Plantinga's words, Descartes' position entails "universal possibilism", according to which, "there are no necessary truths, and no impossible falsehoods; everything, every proposition, is possible because God could have made it true"<sup>15</sup>. On the universal possibilist account, therefore,

(D1)  $Mp$

is true for every proposition, that is, every proposition is 'possibly true'.

Such an interpretation is taken<sup>16</sup> to be justified in reference to Descartes' following statements: "...God cannot have been determined to make it true that contradictories cannot be true together, and therefore that he could

---

<sup>13</sup> *Op. cit.*, p. 42.

<sup>14</sup> (1980), p. 112.

<sup>15</sup> *Ibid.*, p. 107.

<sup>16</sup> *Ibid.*, p. 101.

have done the opposite"<sup>17</sup>, and also "...it is useless to inquire how God could from all eternity bring it about that it should be untrue that twice four is eight, etc.; for I admit that that cannot be understood by us"<sup>18</sup>. These passages indicate that it was within God's power to make it false that,

$$(1) 2 + 2 = 4$$

or,

(2) It is the case that God has created the universe and it has not been created by God.

On the universal possibilist reading of Descartes, therefore, since God is infinite in power, nothing is impossible.<sup>19</sup> But, is "universal possibilism" possible?

Harry Frankfurt argued that the view that God could have made a contradiction ( $p \ \& \ \text{non-}p$ ) true implies the logical possibility of the logically impossible, which is somehow incoherent:

The assertion that some state of affairs can be brought about ordinarily entails that that state of affairs is logically possible. Descartes's statement that God could have made contradictions true seems to entail, accordingly, the logical possibility of the logically impossible. This appears to make very little sense, which... characterises Descartes's doctrine concerning the creation of the eternal truths as "incoherent".<sup>20</sup>

Furthermore, Frankfurt has argued that Descartes' position is unintelligible:

That there is a deity with infinite power is supposed by Descartes to entail the possibility of what is logically impossible. But if it must entail this, then the assertion that God has infinite (...) power seems itself unintelligible. ... If we

---

<sup>17</sup> (1970), p. 151.

<sup>18</sup> (1934), p. 251.

<sup>19</sup> See Plantinga (1980), pp. 102-103.

<sup>20</sup> (1977), p. 43.

cannot understand "infinite power," we also cannot understand, and hence cannot believe or know, the proposition that God's power is infinite.<sup>21</sup>

To consider Frankfurt's first objection, does Descartes' position entail the logical possibility of the logically impossible? Is it somehow incoherent?

Given that Descartes' position can be identified as "universal possibilism", with Plantinga one might argue that Frankfurt's objection can be met along the following lines. Since according to universal possibilism, every proposition is possibly true, that is, no statement is necessarily true, there is not such a thing as "logical impossibility". On this interpretation, therefore, Descartes would not claim that for God the logically impossible is possible, but rather that nothing is logically impossible.<sup>22</sup> If so, Descartes' argument can coherently be formulated as follows:

(3) God has infinite power;

(4) If God has infinite power, there are no necessary truths;

(5) There are no necessary truths.

But, in this case, is not the defender of Descartes committed to at least one necessary truth, namely, *modus ponens*? He is not. Because, in the same way, the defender of Descartes can maintain the truth of all his theorems without affirming that they are *necessarily* true. In other words, one is committed only to the truth of the second premise, (4), rather than its necessity.<sup>23</sup>

What about Frankfurt's claim that if we cannot understand what is "infinite power", by the same token, we cannot understand the assertion that God's power is infinite; and therefore that this is unintelligible? Indeed Descartes already seems to have considered that difficulty as he maintained

---

<sup>21</sup> *Ibid.*, p. 44.

<sup>22</sup> See Plantinga (1980), p. 116.

<sup>23</sup> *Ibid.*, pp. 122-123.



that in order to know that God is infinite one does not need to encompass it in one's understanding completely: "To comprehend something is to embrace it in one's thought; to know something it is sufficient to touch it with one's thought"<sup>24</sup>. Thus, on Descartes' account, we need to make a distinction between "comprehending that *p*" and "knowing that *p*"; accordingly, even though we cannot *comprehend* how God can or could have made a contradiction true, this is not an obstacle for *knowing* the claim that since God's infinite in power, he can make a contradiction true.

It is not entirely clear to me whether such a cleavage can legitimately be made in such a context. To be sure, given that we are finite in our understanding there seem to be *a priori* reasons why we cannot comprehend how an infinitely powerful God can make something which we cannot conceive. But the problem then turns out to be how do we know that God can perform such an inconceivable task at all?

Descartes can be taken<sup>25</sup> to be arguing that in order to grasp the meaning of "infinite power" in this connection we do not need to be able to conceive how God can exercise his "infinite power", that is, even though we do not know how a logically impossible task can be achieved, we can nevertheless know that such a being can have such an ability. Surely, we can suppose the existence of such a being and in so doing we understand what we are saying, and in this sense, Descartes' argument is understandable. That is, one can clearly see what is involved in such an assertion. If what Descartes is saying is tantamount to the claim that God has infinite power if and only if it is within his power to make any proposition true, nothing seems to be unintelligible<sup>26</sup> in this sense. And if that is the target of Frankfurt's objection, clearly such an objection is not conclusive, but it seems to me that Frankfurt's worries about

---

<sup>24</sup> (1970), p. 15.

<sup>25</sup> See Conee (1991), p. 454.

<sup>26</sup> Plantinga (1980), p. 118.

the intelligibility of the Cartesian doctrine go deeper; there is a substantial point (implicitly, at least) in his objection.

I shall return to this issue, before this however, to be fair to Descartes, one should not overlook the distinction between the propositions "God *could* have done *x*" and "God *can* do *x*"; for what Descartes seems to be saying is not that God can now make necessary truths false, but that he could have made necessary truths false. In other words, according to Descartes, although it was within God's power not to create the law of contradiction, or to make it false before creation, having created it once, he cannot (or does not) make it false, presumably because of the fact that God's will is immutable.<sup>27</sup> Hence, God, having created necessary truths, seems, so to say, to have limited himself to them. In a word, it is simply one thing to say that "God could have done *x*" and still another thing to say that "God can do *x*"; hence, the former does not imply the latter.

What exactly does "could" imply in this context? One might rightly say that the assertion that God *could* have made a contradiction true implies that there were alternative possibilities for God other than, say, the law of contradiction which God could have actualised (created); and thus for example, he could have actualised "the negation of the law of contradiction" instead. However La Croix has argued<sup>28</sup> that it is unfair to attribute this view to Descartes; for, on Descartes' account, there are no alternative possibilities *prior* to God's creative activity. That is to speak, since God's creative activity does not consist in actualising unactualised possibilities and states of affairs, thus, necessary truths too are not actualised/ created out of already existing possibilities.

Indeed, this might be partly true, given that, according to Descartes, in God, willing, understanding, and creating are one and the same thing, and that

---

<sup>27</sup> See La Croix (1984), p. 462.

<sup>28</sup> *Ibid.*, pp. 460-461.

none of them is even conceptually *prior* to the other. But if that is true, that is, if there were no alternative possibilities *prior* to God's creative activity, does not Descartes' claim that "...God cannot have been determined to make it true that contradictories cannot be true together, and therefore that he could have done the opposite"<sup>29</sup> seem to remain unintelligible? Surely, to say that *S* is not determined with respect to doing *p*, or that *S* could do non-*p* instead of *p* means that *S* has alternatives other than *p*, and that means there are alternative possibilities *prior* to *S*'s performing *p*.

On the face of it, if universal possibilism is true, as Plantinga rightly pointed out,<sup>30</sup> this would imply that, in fact, *God has no nature*, because none of his properties would be essential to him. This is the case even if we think that it is no longer within God's power to make a any change to necessary truths. Since, as it was within God's power to make any proposition -including the law of contradiction and presumably the very proposition that 'God is omnipotent'- false, it follows that he could have made any proposition predicating a property of him false. But, could God have made the proposition that *God exists* together with the negation of that proposition, *God does not exist*, true ? Could God have made it true that he knows that he does not exist? Or, could God have made it the case that there is no difference between believing and disbelieving in the existence of God such that there would not be any difference between theism and atheism? Of course not. None of these claims seems to be intelligible nor can they consistently be held together with the traditional theistic concept of God.

The ascription of "universal possibilism" to Descartes is however sometimes challenged. Thus it has been argued<sup>31</sup> that Descartes never argued to the effect that there are no necessary truths; rather, he admitted that the

---

<sup>29</sup> (1970), pp. 150-151.

<sup>30</sup> *Ibid.*, pp. 126-129.

<sup>31</sup> See La Croix *op. cit.*, pp. 455-475; Conee (1991), pp. 450-458.



existence of necessary truths, but denied that they are *necessarily* necessary.<sup>32</sup> Thus, for example, Curley suggests:

...we should understand Descartes's doctrine of the creation of eternal truths as involving, not a denial that there are necessary truths, but a denial that those which are necessary are necessarily necessary. To think that of these truths as created is neither to think that they are not necessary, nor to think that there was a time when they were not necessary, but to think that it is not necessary that they be necessary.<sup>33</sup>

Indeed, some of Descartes' texts seem to indicate that he held such a view, thus for example, he says "...if God has willed that some truths should be necessary, this does not mean that he willed them necessarily; for it is one thing to will that they be necessary, and quite another to will them necessarily, to be necessitated to will them"<sup>34</sup>. Accordingly, although there are in fact necessary truths and necessary falsehoods, and that they cannot be otherwise, they are not *necessarily* necessary. Since it is God who made them so - necessary or impossible- hence he could have made them otherwise. So, although there are necessary propositions, there are not *modal* propositions, thus for example, while the proposition (1) is a necessary truth and (2) is impossible or a necessary falsehood; they are not *necessarily* necessary truths or falsehoods; since all modal propositions are in fact *contingent*.<sup>35</sup> On this interpretation, then,

(D2) *MLp*

---

<sup>32</sup> Such a position seems to have been ascribed to Descartes, first, by Geach (1973, p. 10), which is also considered but rejected Descartes' real position in Plantinga (1980), pp. 103-114.

<sup>33</sup> (1984), p. 581.

<sup>34</sup> (1970), p. 151.

<sup>35</sup> Plantinga (1980), p. 108. Thus, there is a considerable similarity between a conventionalist and the Cartesian view of necessary truths which might alternatively be labelled "divine conventionalism".

that is to say, necessary propositions are *possibly* (contingently) necessary. Hence, one might say, God affirms  $2 + 2 = 4$  in every possible world, but he affirms

(6) Necessarily  $2 + 2 = 4$

in the actual world.<sup>36</sup> Consequently, there are worlds in which God does not affirm (6); and "if they had been actual, then *there would have been* possible worlds in which God does not affirm [6]. In fact there are no such possible worlds; but God could have brought it about that there were some"<sup>37</sup>. Hence, although God could not have made (1) false, he could have made it the case that he could have made (1) false, that is, he could have made (1) *possibly* false.<sup>38</sup>

Thus, one might think that there is a clear distinction between the universal possibilist account of modality which entails a "no necessity" view of so-called necessary truths, and the limited possibilist account which acknowledges that there are necessary truths, though it rejects that they are *necessarily* necessary. But, first let us consider what exactly it means to say that necessary truths are *contingently* necessary? Can we make sense of the idea that necessary truths are *contingently* necessary?

Evidently, there are certain necessities which are necessary but only contingently, such as nomological necessities which we can conceive to have been otherwise. Even though they are in a sense unassailable necessities for us, in another sense, we can conceive their being otherwise without there being a contradiction in our understanding. Therefore, it makes perfect sense to say that nomological necessities are *contingently* necessary and *not necessarily* necessary. We can conceive that had God wished, he could have created another world other than the actual one, in which a different set of natural laws would have been true. But, what enables us to think so, however,

---

<sup>36</sup> *Ibid.*, p. 109.

<sup>37</sup> *Ibid.*, p. 109.

<sup>38</sup> *Ibid.*, pp. 112-113

is the fact that what is 'nomologically necessary' is 'logically contingent'; the reference of 'contingently' in the modal iteration of natural necessities is 'logical'.

If so, however, how are we to understand that logico-mathematical necessities too are *contingently* necessary? What might be the reference or ground of 'contingently' involved here? If the answer is 'logical possibility' one seems to run into a contradiction. For, if by 'logical necessity' we mean which we cannot conceive to have been otherwise, then, in saying that what is logically necessary is *contingently* so, we seem to be saying that we can conceive what is granted to be inconceivable. As I shall return to this issue (in 5.4), there is a *prima facie* difficulty with the contention that necessary truths are contingently necessary if both 'contingent' and 'necessary' are used in the logical sense.

However, are necessary truths *necessarily* necessary? Thus far, we seem to have implied that "for any proposition  $p$ ,  $p$  is a necessary truth if and only if it is necessarily true that  $p$  is necessarily true". This is equivalent to the S4 modal principle that

$$(N) L \supset Lp.$$

On the face of it, it is rather counter-intuitive to think that  $Lp$  is true but  $LLp$  is false; any argument establishing the contingency of  $Lp$  seems to equally establish the contingency of  $p$ .<sup>39</sup> It is therefore rather intuitive to think that if  $p$  is logically necessary, this can hardly be a matter of accident or certain contingent facts that  $p$  is necessary<sup>40</sup> and thus that they are *necessarily* necessary. This matter however is arguable and I do not intend to settle the controversy here; therefore, I shall for the sake of argument assume that (N) is correct, that is, a proposition is a necessary truth if and only if it is

---

<sup>39</sup> See Konyndyk (1986), p. 48.

<sup>40</sup> See Hughes and Creswell (1968), p. 43.



necessarily true that it is a necessary truth,<sup>41</sup> and thus I shall, with Van Cleve, think that "theories that seek to ground necessary truths in something contingent do not merely throw overboard the axiom  $Lp \supset Lp$ ; they do away with necessity altogether"<sup>42</sup>. Thus, I assume, no progress can be made on the grounds of substituting "limited possibilism" with "universal possibilism", and therefore, if there are good reasons for rejecting that God *could have made*, say, the law of contradiction false, by the same reason, there are good reasons for rejecting that he could have made it the case that he could have made it false.

### 5.3 Necessary Truths and the Divine Nature

Let us set aside the conceivability of how the mathematical truth  $2 + 2 = 4$  could have been untrue, there seem to be some necessary truths such that if we think that they could have been different from what they are, or indeed that they could have been false, we simply find ourselves in a viciously circular situation such that we cannot attach a meaning even to what we are arguing for. So for example, if we consider the law of contradiction within the scope of created objects, interestingly enough, it seems that we would be committed to that,

(7) God has created necessary (or eternal) truths and that they have not been created by God,

---

<sup>41</sup> For this dispute, see Strawson (1948), pp. 184-200; Lewy (1950), pp. 195-210; Pap (1958), pp. 119-127; Plantinga (1974), pp. 51-54, Lewy (1976) pp. 58-64; Quinn (1982); Wright (1985), pp. 183-189, and Peacocke (1997), pp. 563-569. The S4 principle is more controversial when applied to the certain issues in the domain of metaphysical or logically broad necessity; that is, the origins of certain objects/artefacts such as chairs, tables and ships. For this, in addition to Plantinga (1974), pp. 51-54, see Chandler (1976), pp. 106-109; Salmon (1982), pp. 229-252; (1984), pp. 114-117; (1989), pp. 3-34.

<sup>42</sup> (1994), p. 62.

could be true. But, even the expression of (7) requires the observance of the law of contradiction. Furthermore, if we take the creation of necessary truths and thus the law of contradiction as an indifferent act of God, as aforesaid, this seems to create certain predicaments in regard to the divine nature itself, that is, God's existence and his essential properties. Thus, for example, it is essential to the theistic conception of God that he is omniscient, omnipotent, and wholly good. But if one considers necessary truths as created beings, or as creatable objects, and as a result that the set of necessary truths could have had different members, he must concede that

(8) God is omniscient and he does not know anything,

or,

(9) God is omnipotent and he is powerless,

could have been true.

But then, it has been said, God seems to have *no nature*,<sup>43</sup> for it was within God's power to have made any proposition predicating a property of him false, and consequently no property -not even power- can be predicated of God *essentially*. To put it briefly, it would have been the case that it was within divine power to make it true that he knows that he does not exist as he could have made himself powerless, ignorant, or morally imperfect.<sup>44</sup>

Nevertheless, referring to Descartes' remarks that "...the existence of God is the first and most eternal of all possible truths and the one from which

---

<sup>43</sup> Nevertheless, it seems open to the defender of Descartes to argue that in fact God has a nature in that once God from all eternity establishes necessary truths by his free will, he is no longer free to change them, and that in this sense one might attach a sense to God's having a nature. In other words, one might say, God follows his will once he creates, that is, he follows what he has already decided, since his will is immutable. But then Descartes would have to argue that in fact God *can* create or, in fact from all eternity *did* create his own nature. Of course, this could be an acceptable response to the *no nature* objection if one could make any sense of self-causation and consequently self-creation. I shall consider this issue in 6.4.

<sup>44</sup> For the details of this objection, see Plantinga (1980), pp. 126-129.

alone all others derive"<sup>45</sup> some commentators have argued to the effect that, according to Descartes, (necessary) truths about God are indeed uncreated; whereas some others have found that it would be arbitrary and *ad hoc* of Descartes to exclude essential truths about God from the scope of his doctrine of creation.<sup>46</sup> Thus according to the former view necessary truths concerning God's essence do not derive from the divine will, but provide the conditions for the derivation of the rest of necessary truths. Thus for example, in his consideration of this point N. J. Wells highlights a distinction between the necessary truths pertaining to the divine nature and those concerning the creatures, stressing that the former is more eternal than the latter:

All essential/ necessary truths are *eternal* in Descartes, but some are *more eternal* than others. Or, all essential truths are *necessary*, but some are *more necessary* than others. For uncreated essential truths are absolutely necessary while created essential truths are but hypothetically and conditionally necessary. ...it can even be said that all contradictions are *impossible* but some are *more impossible* than others. ...What is at issue here, in the instance of the uncreated eternal truths, would be all the truths dealing with God's existence, His essence and nature, His attributes, especially the classical Cartesian truths about God's Veracity, Goodness and Omnipotence. Descartes is quite emphatic that we can and do know truthfully and certainly, such *uncreated necessary truths*.<sup>47</sup>

In Descartes' view, according to Wells, therefore, the truths concerning God's nature, essential attributes and existence are immune from the doctrine of creation; and that is why they are absolutely necessary. Unlike the created necessary truths which can be known and comprehended by the human mind, those having to do with God's nature, the uncreated necessary truths, though

---

<sup>45</sup> (1970), p. 14.

<sup>46</sup> Wilson (1978), p. 124.

<sup>47</sup> (1982), pp. 193-194. Similarly, see also Curley, *op. cit.*, pp. 593-597; and Hughes (1995), pp. 138-151.



not unintelligible -since the idea of God, on Descartes' account, is the most clear, most true, most distinct and therefore most eternal- are nevertheless incomprehensible.<sup>48</sup> Now it is time to examine Wells' alleged solution to the aforementioned difficulties, in terms of his distinction between created and uncreated necessary truths.

For one thing, it is hard to see how Wells' inference *does* follow from Descartes' related text, namely, that the existence of God is the first and the most eternal of all truths which constitutes the ground for the derivation of the rest of necessary truths, which has been put forward as textually satisfactory ground for the contention in question. Surely, to say that the existence of God is the most eternal truth *per se* does not imply that necessary truths about God himself are not created, nor does it seem to imply that they do not depend upon the divine will. Even Wells himself seems to have noticed this problem when he says, "unlike the region of the created necessary truths where nothing is willed [by God] necessarily, in the region of the uncreated necessary truths, everything is, and everything is willed, necessarily"<sup>49</sup>. But just what does it mean to say that necessary truths about God himself are *willed by God necessarily* as opposed to the necessary truths about the creation? Of course to say that "*S necessarily wills to do x*" (where *S* is God) does *not* mean that "*x is uncreated*". By the same token, to say that God necessarily has -from all eternity- willed necessary truths about his own nature does not imply that they are *uncreated*. The principal trouble with Wells' interpretation, however, is the fact that it is hard to see how "*x 's being willed necessarily*" could be *equated* to "*x's existing uncreated*", in other words, there does not seem to be a manifest incompatibility between "*x's being willed necessarily*" and "*x's being created*". By contrast, one might rightly argue, that "*x's being willed*" implies that "*x is created*", because it is difficult to see how something could have been

---

<sup>48</sup> *Op. cit.*, pp. 194-195.

<sup>49</sup> *Ibid.*, p. 196.

willed (even though necessarily) and still be uncreated. So, it can be said that the proposed textual evidence in Descartes does not enable someone to draw Wells' created-uncreated distinction.<sup>50</sup>

And on the other hand, it remains to be answered, what would be the status of the claim that "God has a will", is it a created or an uncreated necessary truth? To say that *God necessarily willed that he has a will*, is clearly circular if not incoherent.

Another procedure to exempt the necessary truths about God himself from the scope of creation is to follow Descartes in his general conviction that God cannot be conceived to be an "evil deceiver". Even though God is perfectly omnipotent, this does not imply that he could deceive us. But, if that is true, then after all God *has* a nature, and hence there would be some truths about God which are not within his power to alter -those truths which are in conflict with his nature-. For example, "deceiving" is incompatible with being a morally perfect being, etc.- and as a result, it would be an error to ascribe to Descartes the view that God can or could make himself morally imperfect, or powerless etc.

In fact, although this seems convincing and thus acceptable to some extent, it still remains troublesome and thus insufficient to provide a justifiable ground for making the created/ uncreated distinction between

---

<sup>50</sup> One might say, nevertheless, that even though Wells' distinction in terms of being created/ uncreated is in fact incorrect, it is still untrue to say that Descartes makes no distinction at all between necessary truths about God and those about the creation. Given that Descartes' doctrine could be expressed in terms of iterated modalities, it might seem somewhat reasonable to maintain that some necessary/ eternal truths are *necessarily* necessary while some are *contingently* necessary. Since, in order to explain the very ground of the necessity of so called created necessary truths -which, on Descartes' account, is God's immutable will- one needs at least to suppose that God's immutability, hence the necessary truths about God himself belong to a "higher order" of necessary truths. But, on the Cartesian picture, this hardly would imply that they are uncreated. For such an argument; see Curley *op. cit.*, p. 593.

necessary truths. So for example, let us consider the law of contradiction that is, that  $p \ \& \ \text{not-}p$  is false, as a matter of logical necessity. To which realm does it belong? *Created or uncreated?*

First of all, to suppose that the principle of contradiction merely belongs to the realm of created necessary truths, as Wells himself pointed out,<sup>51</sup> would entail that in fact God is a "deceiver" and thus, for example, it would have been perfectly possible for God to make it true that there is no difference at all between the theist who affirms God's existence and the atheist who denies that there is a God and this is undoubtedly in conflict with God's being essentially truthful.<sup>52</sup> On the other hand, if the principle in question only belongs to the realm of created necessary truths, *not* to the uncreated one; that is, the realm of divine existence, nature, and attributes; it would be possible to assign to God the truth that

(10) God exists and that he does not exist,

or similarly that,

(11) God is morally perfect and he is sinful.

To be sure, none of these conclusions is agreeable from a theistic point of view. God as a perfect being can neither be a "deceiver" nor should be taken to be responsible for lacking the power to make the propositions (10) or (11) true. But if so, the question whether the law of contradiction is created or uncreated seems to remain unanswered.

The defender of the created/ uncreated distinction seems ready to bite the bullet and maintain that the principle of contradiction belongs to *both*

---

<sup>51</sup> *Op. cit.*, p. 196.

<sup>52</sup> It might be nevertheless argued that if God could have actualised a world in which the affirmation and the denial of the existence of God would have amounted to the same thing, he would then have not been a "deceiver" provided that such a state of affairs reflects the reality of that world in that there would have been a correspondence between the believers' image and the way things are in this respect. However, it is hard to see how such a world can really be possible and what it would look like.



realms, as Wells grants "the Cartesian answer to this question, for all the tensions and anomalies consequent thereto, is that the principle of non-contradiction is both uncreated and created"<sup>53</sup>. But what does it mean to say that the principle of non-contradiction belongs to both created and uncreated realms?

The key to understanding this, according to Wells<sup>54</sup>, consists in Descartes' following remarks: "...it can be said that '*the same thing cannot both be and not be at the same time*' is a principle which serves in general, not to make known the existence of anything else, but simply to confirm its truth once known"<sup>55</sup>. For Wells, this means that the principle of contradiction when taken just in itself without any exemplification in some real instances is purely formal, hence does not imply the existence of anything. Accordingly, given the existence of a created essence, and the principle of non-contradiction as instantiated, -or as "embodied" in Wells' terms- in that created essence, the principle in question would be a genuinely *created* truth. Thus for example, if there is a rose -existing actually or possibly- then a rose is a rose, and cannot not-be a rose so long as the rose continues to exist. On the other hand the principle of non-contradiction belongs to the uncreated realm, "...given the existential evidence of an uncreated essence, then the principle of non-contradiction, structuring that essence, and expressed in uncreated, necessary, essential truths, is obviously *uncreated*"<sup>56</sup>. And thus Wells concludes:

...these latter [uncreated] truths, *regulated* by this uncreated principle of non-contradiction are absolutely necessary, as is the principle of non-contradiction itself on this level. The former truths, i.e. the created variety,

---

<sup>53</sup> *Op. cit.*, p. 197.

<sup>54</sup> *Ibid.*, p. 197.

<sup>55</sup> Descartes (1970), p. 197.

<sup>56</sup> Wells *op. cit.*, p. 197.

are but *hypothetically* necessary, and the principle of non-contradiction attending them is equally *hypothetical* and *conditional*.<sup>57</sup>

Yet, it is a question whether Wells' conclusion follows from Descartes' quoted passage, and it seems to me that it does not. Because, first of all, to say that the principle of non-contradiction does not imply the existence of something can hardly be taken to imply that the principle just taken in itself is *not* something, or rather *nothing*. Of course, it is one thing to say that the principle of non-contradiction, as a purely formal logical truth, does not indicate the factual existence of anything, but it is something altogether different to say that *in itself* it is not something or an essence. Indeed, the basic point of contention in the Cartesian argument is not whether necessary truths -say, the law of contradiction- imply the existence of anything or that they are presupposed in the instantiation of beings of different realms, but rather whether necessary truths themselves as formal (platonic) essences are created. And it seems to me that, from the perspective of being faithful to textual evidence, one might rightly argue that Descartes did not think necessary truths in themselves are nothing when he says "...[God] is no less the author of creatures' essence than he is their existence; and *this essence is nothing other than the eternal truths*. ...but I know that God is the author of everything and that these truths are *something* and consequently that he is author"<sup>58</sup>. Consequently, the whole question is whether the principle of non-contradiction itself, as an eternal essence,<sup>59</sup> is created or not, and it seems to me that Descartes explicitly thought that it is.

---

<sup>57</sup> *Ibid.*, p. 197.

<sup>58</sup> (1970), pp. 14-15. Italics are mine.

<sup>59</sup> In fact it is a controversial matter whether Descartes' position entails Platonism; thus for example, according to Kenny, Descartes is the founder of modern Platonism in the sense that necessary truths belong to an eternal realm of substances distinct from other created substances; while on Gewirth's view, nothing is more contrary to Cartesianism than

Secondly, even given the supposed textual evidence, there seems to be just no reason for attributing to Descartes the view that the law of non-contradiction belongs to both created and uncreated realms. Instead of making that distinction, on the contrary, why should we not think that the principle in question, as an eternal essence, is exemplified/ instantiated both in the created and uncreated realms? Would not the fact that the principle of non-contradiction is exemplified in both realms and thus is a property common to both, suffice to show that one cannot draw the asserted distinction in the principle? After all, it seems to me that Wells' argument begs the question because of the fact that the claim that the principle of the law of contradiction is both created and uncreated itself is an instance of the very principle in question.

Nevertheless, there seems to be another strategy to defend the view that the principle of non-contradiction should belong to both created and uncreated realms. That is to think that the principle itself can only be considered as something if and only if it is instantiated, namely, exemplified in the actual existence of something real or actual. Thus the principle would contingently be instantiated in the created realm in the sense that the actual existence of the created realm is not a necessary but a *contingent* fact. At least, it is conceivable there was a time when necessary truths regarding the physical realm did not exist. In this case, the whole problem will depend upon the truth conditions of necessary truths, and hence upon the law of non-contradiction. Considering that the created realm may or may not have existed, or that it is not eternally actual, the necessary truths (say, the law of non-contradiction) instantiated in this (created) realm are created with this realm of beings. However, since God's essence by contrast is eternally actual,

---

Platonism. For this debate, see Gewirth (1970), pp. 668-685; Kenny (1970), pp. 692-700; and Schmaltz (1991), pp. 129-170.



necessary truths about God including the principle of non-contradiction should constitute a legitimate exception to the doctrine of creation.<sup>60</sup>

But this also seems to be unsatisfactory. For, in the first place, given Descartes' account of creation, it is difficult to conclude from the fact that the physical realm may not have come into existence, therefore, that it is *contingent*, that there was a time when it did not exist, or, that there has been a time when necessary truths were unactual. By contrast, it seems to me that Descartes clearly thought that God did create everything from all eternity. Secondly, Descartes made it explicit that although contingent beings presuppose necessary truths, they do not depend on contingent beings for their existence. Indeed, for him, the immutable essence of, for example, a triangle does not depend on the existence of material triangles.

As a result, it seems to me rather difficult to think that Descartes made a distinction between necessary truths about God himself and those regarding the beings other than God when he argued that necessary truths are indeed created; though it is agreeable for him that the very existence of God belongs to a "higher order" of necessary truths, and hence that it constitutes the ground for the derivation of the rest of necessary truths. But, if such a distinction cannot be made, then the contradictions and counter-intuitive consequences of such a doctrine on the issue of the divine nature would remain unresolved.<sup>61</sup>

---

<sup>60</sup> See Curley, *op. cit.*, p. 596. Curley himself seems to grant that such a distinction involves difficulties.

<sup>61</sup> It is equally difficult to defend Descartes by excluding the necessary truths pertaining to "Divine nature" from the scope of the doctrine of the creation of eternal truths on the grounds of the negative theology as he clearly holds positive descriptive of divine nature such as the claim that God is truly omnipotent.

## 5.4 Necessary Truths, Conceivability and the Human Mind

To say that necessary truths depend upon God by way of creation indicates that they *could or might have been* otherwise. As we have seen, one might have difficulties in understanding this contention, however, Descartes' reply to this question seems to highlight one of the most important aspects, the *epistemological dimension*, of his doctrine: the human mind is finite *vis-a-vis* God's infinite power, and thus incapable of conceiving how it could have been the case that for example the law of contradiction is not true, or that  $2 + 2 = 4$  is not necessarily true. Although contradictions are so evident that we cannot put them before our minds without judging them to be entirely impossible such as the one that *God might have made creatures independent of him*, it is simply beyond the capacity of our minds to conceive how this could have been true. And "...it is useless" in Descartes own words, "to enquire how God could from all eternity bring it about that it should be untrue that twice four is eight, etc.; ...that cannot be understood by us."<sup>62</sup>

That is why, it might be said, Descartes' argument is invulnerable to an objection which might be raised on the grounds of the general conviction that the absolute criterion of *x's* being logically impossible is *equivalent to x's being logically (or epistemically) inconceivable*. Simply, Descartes' doctrine, in this respect, seems to be epistemically *unassailable*. Even though our minds as a result of certain restrictions which have been put by God when he created the human mind cannot conceive how some logical, or mathematical truths such as the law of contradiction, or  $2 + 2 = 4$  could have been otherwise, or even false; this, *in itself* cannot be taken as a sufficient reason for concluding that they cannot be or could not have been otherwise, and therefore that Descartes' theory is false; rather he maintains,

---

<sup>62</sup> Descartes (1934), p. 251.

I merely say that He has given me such a mind that I cannot conceive a mountain without a valley, or an aggregate of one and two which is not three, and that such things involve a contradiction in my conception.<sup>63</sup>

For my part, I know that my intellect is finite and God's power is infinite, and thus I set no bounds to it; I consider only what I can conceive and what I cannot conceive, and I take great pains that my judgement should accord with my understanding. And so I boldly assert that God can do everything which I conceive to be possible, but I am not so bold as to deny that He can do whatever conflicts with my understanding - I merely say that it involves a contradiction.<sup>64</sup>

So, according to Descartes, the apparent contradiction between God's omnipotence and our conception of logical or mathematical necessity will be reconciled and thus will fade out only when we consider the fact that God, in creating us, has put certain restrictions on our understanding. It is therefore inconceivable to us how, for example, the negation of  $2 + 2 = 4$  or, of the law of contradiction could have been true since our mind is not supposed to delimit the ultimate scope of what is possible -all necessities and possibilities. Therefore, we are not entitled to exclude them as *possibilities in themselves*; but rather we should think that the scope of human understanding is restricted to the actual set of necessary truths, and this is characteristic of our mind which has been created with this particular constitution. This, in other words, would indicate that the scope of the human understanding is narrower than what is possible in the ultimate sense, and therefore narrower than what God can actually do. The mind is incapable of conceiving how God could have exercised his power in creating a different set of necessary truths.

---

<sup>63</sup> (1970), pp. 236-237.

<sup>64</sup> *Ibid.*, pp. 240-41.



Furthermore, considering certain passages in a related text, it seems likely that Descartes in fact thought that necessary truths are rooted in the particular mode of the human mind:

...when we apprehend that it is impossible that anything can be formed of nothing, the proposition *ex nihilo nihil fit* is not to be considered as an existing thing, or the mode of a thing, but as a certain eternal truth which has its seat in our mind, and is a common notion or axiom.<sup>65</sup>

All modalities therefore seem to do with the scope and limits of the human mind; all necessities and possibilities therefore can be seen as certain consequences of the *function* of the constitution of the human mind.

But, would it fair to call Descartes' notion of modality *epistemic*? This point needs some clarification. Of course, Descartes' conception of modality does not depend on the function of certain minds in the sense that one mind might grasp necessary truths better than the other, or on the social and historical conditions of human knowledge,<sup>66</sup> nor on the evolutionary process of our epistemic categories. Rather, as Ishiguro rightly pointed out,

...what Descartes means by eternal truths having their seat in the [human] mind seems closer to Kant's view on the *a priori* than it does to the epistemic views like that of Hume. What is at issue is the universal validity of these eternal truths in our mental constitution.<sup>67</sup>

On this account, necessary truths are embedded in, so to speak, the *ontological mode* of the human mind, hence it seems to me more accurate to label Descartes' notion of modality as *meta-epistemic* (or metaphysical) rather than *epistemic*. But once again, though this innate set of necessary truths

---

<sup>65</sup> Descartes (1968), pp. 238-239.

<sup>66</sup> Ishiguro (1986), p. 463.

<sup>67</sup> *Ibid.*, p. 463.

exists in every human individual, since the actual set of necessary truths need not have been the way it is, God could have chosen a different set of necessary truths and imposed them as *a priori* truths on the human mind.

In sum, then, by this account, necessary truths are conditionally (hypothetically) necessary, namely they are necessary if and only if God creates the human mind, which is the seat of necessary truths, in one mode rather than another. In other words, since all modality is conditional - depends on the particular way God creates our minds<sup>68</sup>, it follows that the fact that a proposition cannot be at the same time both true and false, or that  $2 + 2 = 4$  is true, owes its validity to God's creating the human mind in the actual (present) form.

However, there seems to be an overall difficulty with the conviction that, on Descartes' account, necessary truths owe their ontological nature, that is, unchanging properties or essences, to their seat in our minds. And most of the confusion seems to arise from Descartes' own ambiguous and bewildering text. The chief difficulty with this interpretation consists in considering Descartes altogether as an *anti-realist* with respect to the ontological nature of (abstract objects and) necessary truths. Thus for example, Descartes might rightly be considered to be propounding a creaturely mind-dependent, *anti-realist* or *conceptualist* view of necessary truths on the basis of the passage indicating that the seat of eternal truths is the human mind. Yet this seems to be inconsistent with some other passages in Descartes' related text, which reasonably might lead someone to think that he is somehow a *realist* in this respect. Thus for example, if we consider his following statements, we might

---

<sup>68</sup> For a detailed exposition of this kind of interpretation of Descartes' account of modality, see *ibid*, pp. 463-464. One might wonder how such a meta-epistemic of modality can held together with the platonic elements concerning necessary truths in Descartes. This can be a matter of an independent debate.

plausibly think that his position clearly indicates that necessary truths are mind-independent:

...[God] is no less the author of creatures' essence than he is their existence; and this essence is nothing other than the eternal truths. ...but I know that God is the author of everything and that these truths are something and consequently that he is author.<sup>69</sup>

So, there can be conflicting intuitions about whether Descartes held a mind-dependent view of (abstract objects and) necessary truths or not.<sup>70</sup> However, this is beyond our interest and as we have already seen that an anti-realism (conceptualism) of that abstract objects and necessary truths in terms of human mind-dependency is untenable I shall not get into this debate again.

The basic issue, however, is that Descartes' doctrine of the creation of eternal truths implies that although it is inconceivable to the human mind, nevertheless, necessary truths *could* have been otherwise in a metaphysical sense. The reason why this is inconceivable by us, is the fact that our mental constitution is from all eternity determined to be limited in conceiving, and thus it is a created property -ontological mode- of the human mind to regard  $2 + 2 = 5$  as inconceivable, hence it is incapable of understanding how God could have exercised his power over necessary truths and make them false. If so, then,

(C) For any necessary proposition *p*, God could have made *p* otherwise even if it is inconceivable for us how *p* could have been so given the fact that the divine power is infinite and our minds are finite.

Here, we might to have some difficulties. Let us set aside the problems such as whether God could have created a human mind which necessarily

---

<sup>69</sup> (1970) pp. 14-15.

<sup>70</sup> I shall not enter into further exegetical debate here.



violates, say, the law of contradiction; it seems to me that there are some further difficulties which I think are in essence related to Frankfurt's aforementioned objection about the intelligibility of Descartes' position which seems to entail that there are possibilities beyond what is logically impossible thanks to the infinite divine power.

(C) obviously entails that it was a possibility for God to have created a different (human) mind with a different set of restrictions, i.e., necessities and possibilities, and also it entails that what is in fact necessary and impossible for us is not necessary, therefore, is possible for God<sup>71</sup>. In this case, there seems to be two different kinds of possibilities at work here: what is divinely possible and what is humanly possible. These two kinds of possibilities differ from each other both intensionally and extensionally; "possible" means one thing when used for God, still another thing when used for human beings; similarly, the things which cannot be done by us, can be done by infinite divine power. But the trouble is that it remains unclear how such a position can be consistently maintained. Which of these two possibilities is involved in such a contention? Given Descartes' claim that our minds are meta-epistemically bounded by the limits imposed by God, which in turn determines what is necessary and possible for us, what would be the epistemic status of the claim that God could have made necessary truths otherwise (by us)? Such a thing, namely, that God could have made necessary truths otherwise, seems to be a possibility beyond our conceiving power, and such a possibility, on the very grounds of the proposed hypothesis, is not supposed to be conceivable by Descartes<sup>72</sup>. This, it seems to me, is the core of Frankfurt's "unintelligibility objection" which remains unanswered.

---

<sup>71</sup> We have already seen that a Cartesian defence on the grounds of that there are no possibilities *prior to creation* is ill-founded. Similarly, one cannot consistently hold both the view that there were no possibilities *prior to the creation* of the human mind and that God could have created another human mind with a different set of necessary truths

<sup>72</sup> This point is well-underlined in McFetridge (1990b), p. 189.

In conclusion, it seems that there are good reasons for rejecting the Cartesian view that necessary truths depend on God by way of creation. Thus, considering the Cartesian doctrine of necessary truths entails "universal possibilism", that is, that God could have changed the modal property of necessary truths, we have seen how this conflicts radically with our philosophical as well as theistic intuitions as it leaves us with untenable consequences. Given that necessary truths are necessarily necessary, such a doctrine does not circumvent these problems when construed as "limited possibilism". And finally, we have seen that such a view can hardly be consistently maintained on the grounds of epistemic unassailability.

If so, there are good reasons for thinking that necessary truths cannot be considered within the limits of 'creation' and that not even God can change the ontological and modal properties of abstract objects and therefore of necessary truths by creating different worlds. On the contrary, abstract objects and necessary truths turn out to be *prior* to the creation or actualisation any possible world; they delimit what is possible, or indeed, what can be true about any possible world. Therefore, I conclude that these considerations, once again, strengthen our realistic intuition that necessary truths reflect the essential properties and relations of necessarily existing abstract objects which, in the previous chapter, we have identified with ideas in the mind of God.

**CHAPTER SIX**  
**CREATIONISM: THEISTIC ACTIVISM**



## 6. CREATIONISM: THEISTIC ACTIVISM

Having examined the Cartesian doctrine of eternal truths, we have seen that God cannot be responsible for the existence of abstract objects and necessary truths *via* his creation inasmuch as this would entail that it was within God's power to have created a different set of necessary truths as well as refraining from creating any necessary truths at all which leads us to some insurmountable difficulties. However, T.V. Morris and C. Menzel have argued that one can plausibly hold that the divine creative activity is responsible for the realm of abstract objects and necessary truths without committing oneself to the problems facing the Cartesian doctrine.<sup>1</sup> Thus, according to what they call "Theistic Activism", one can consistently maintain that God creates abstract objects and necessary truths in conjunction with the realist intuition that they exist necessarily and that they have their properties and relations necessarily. However, in what follows, I shall argue that the very concept of "creation" employed in such a context is incorrect and therefore cannot be properly predicated of abstract objects and therefore necessary truths.

### 6.1 Theistic Activism

In fact, there is a considerable overlapping between theistic activism and divine conceptualism in that both take the reference of necessary truths to be the realist ontology of abstract objects and ground this ontology in the nature and mind of God. However, theistic activism differs fundamentally from divine conceptualism by maintaining that such an account can be reconciled

---

<sup>1</sup> See T.V. Morris and C. Menzel (1986), pp. 353-356.

with a traditional doctrine of creation. Thus, provided that the traditional theistic God can be characterized as "an active, creative intellect", according to Morris and Menzel, there are good reasons for supposing that he is *creatively* responsible for the existence of the necessary realm along the following lines:

...all properties and relations are God's concepts, the products, or perhaps better, the *contents* of a divine intellectual activity, a causally efficacious or productive sort of divine conceiving. Unlike human concepts, which are graspings of properties that exist ontologically distinct from and independent of those graspings, divine concepts are those very properties themselves; and unlike what is assumed in standard platonism, those properties are not ontologically independent, but rather depend on certain divine activities. ... this view can be extended to the rest of the traditional platonic domain. All necessarily existent propositions, for example, can be thought of as "built up" out of properties. Thus, in the way in which we characterize properties as God's concepts, we can characterize propositions as God's thoughts. So, for example, the proposition that red is a color can be construed as the content of God's thinking: Red exemplifies *being a color*. So the existence of propositions as well derives from an efficacious divine conceiving. And taking numbers to be a variety of property (...), we thus have all necessarily existent abstract reality, from necessary mathematical objects to haecceities, to non-mathematical universals, to propositions, deriving existence from God.<sup>2</sup>

It is the nature of God's concepts which makes certain true propositions necessarily true where propositions are considered to be divine thoughts. So, for example, let us consider the necessary proposition

$$(1) 2 + 2 = 4.$$

On this account,

the number 2, the number 4, the relation of addition, and that of equality are all divine concepts, all products of the divine conceiving activity. The

---

<sup>2</sup> *Ibid.*, p. 355.

existence of the proposition that  $2 + 2 = 4$  is thus the existence of a divine thought. Its truth is also a function of that divine activity.<sup>3</sup>

Furthermore, according to the theistic activist, since God thinks (1) in every possible world, (1) is not merely true, but necessarily true, hence both the truth value and modal status of a necessary proposition are dependent on God. By contrast with the Cartesian voluntarism, on the account of "theistic activism", God could *not* have created a (possible) world in which  $2 + 2 = 5$ , because all modality is a function of the efficacious conceiving activity in which God (himself) is in fact engaged. God, therefore, cannot/ could not have created abstract objects and necessary truths other than the way they actually are, and therefore it would be incorrect to say that he was indifferent with respect to the actual set of necessary truths and objects. Rather, "God's creation of the framework of reality [the framework of abstract objects and necessary truths] is ... eternal and necessary -it never was, will be, and could not have been, other than it is."<sup>4</sup> So, according to the theistic activist view,

(TA) For any abstract object *O* or necessary truth *T* to be created is to be thought by God *eternally* and *necessarily*.

But just what does (TA) mean? *How can God's thinking of an abstract object O eternally and necessarily be taken as equivalent to the eternal and necessary creation of O?* We might agree with Morris and Menzel that there are good reasons for identifying the ontology of abstract objects and necessary truths with God's mental contents but might find it hard to accept (TA).

---

<sup>3</sup> *Ibid.*, p. 356.

<sup>4</sup> *Ibid.*, p. 357.



## 6.2 Creation, Time and Beginning

What is it for something to be created? It seems rather plausible to say,

(2)  $x$  is created if and only if  $x$ 's existence has a beginning.

But it would be *ex hypothesi* conceded that no abstract objects such as number 4, or no necessary truth, such as "the whole is greater than the part", ever began to exist. Thus as Plantinga pointed out, it is reasonable to think that

what God has created are the heavens and the earth and all that they contain; he has not created himself, or numbers, propositions, properties, or states of affairs... to suppose that they have been created is to suppose that although they exist now, there was a time at which they did not; and this seems clearly false.<sup>5</sup>

But given (TA) and (2) the theistic activist seems inevitably committed to the view that there was a time before which abstract objects and necessary truths did not exist. More importantly, given that God himself has properties, it would follow that there was a time before which he did not have his properties, thus, that there was a time when he was neither omnipotent nor omniscient and so on. But would not that simply indicate that there was a time before which God was not God?

The defender of "theistic activism", however, might avoid this kind of nonsensical consequence if he could show that (2) is false; and that after all the notion of "beginningless creation" is not indefensible; for there seem to be many philosophers, such as Aquinas, in the theistic tradition who endorsed the reasonability of the beginningless creation of the universe.

---

<sup>5</sup> (1974), p. 169.

The question then turns out to be whether one can attach any sense to the notion of beginningless creation<sup>6</sup>; and this being the issue, one needs to focus on the very conceivability of actually infinite temporal events of past series. For it is the inconceivability of actual infinity which has been frequently argued to be a counter-argument to the idea of beginningless creation by the upholder of the view that the universe and therefore that the creation has a beginning.

Aristotle seems to have taken "infinity" in the sense of *extendible finitude*, that is, "however large a finite number you have taken, you can take more".<sup>7</sup> Thus, infinity is not an all-embracing process, completed whole, which has nothing outside it but rather a never completed unceasing process which always has something outside it. But this kind of infinity is just *potential* infinity, and cannot *actually* exist, and thus, for example, although the serial of natural numbers can be extended in an infinite way, there can never be an actually infinite series of natural numbers; and similarly although the space can be infinitely divided, it is never actually infinite.<sup>8</sup>

Yet the conviction that infinity can only be potential not actual seems to have been undermined by the recent set theoretic developments, particularly by Cantor's work. The core of Cantor's theory of transfinite numbers is that there can be actual infinite sets, and in contrast to the Euclidean axiom that the whole is greater than a part, a set is argued to be infinite if and only if a part of it is equivalent to the whole. Thus for example, let us take the set of natural numbers and the set of even numbers. At first sight, while we expect the set of natural numbers to be greater than the set of even numbers -since the latter is a proper subset of the former- when we

---

<sup>6</sup> By "beginningless creation", I understand a creation which is not preceded by any period of uncreation whatsoever.

<sup>7</sup> Sorabji (1983), p. 210.

<sup>8</sup> Craig, W. L., (1979), pp. 65-66.

place them in a one-to-one correspondence, they turn out to be equivalent. Therefore, the basic feature of an infinite set appears to be that it has a proper subset which is equivalent to itself.<sup>9</sup> So, given these set theoretic considerations, infinity no longer seems to be merely potential and therefore, one might say, there is no reason why the actual infinite cannot exist. But, is it just that kind of infinite *actuality* which is presupposed to be impossible by the defender of the view that creation has a beginning?

Indeed this is the crux of the problem. The Cantorian account of actual infinity, it has been argued, has nothing to do with the real world, because "the infinite is nowhere to be found in reality. It neither exists in nature nor provides a legitimate basis for rational thought - a remarkable harmony between being and thought."<sup>10</sup> Accordingly, Cantor's set theoretic infinite actuality is something to be considered only within the limits of the mathematical world and therefore cannot possibly undermine the alleged impossibility of actual infinity. The actual infinity that is considered to be impossible, therefore, is not a "mental-mathematical" impossibility, but rather is an "extra-mental" existence which instantiates in the real world.<sup>11</sup> However, since "beginningless creation" presupposes the very real possibility of *actual infinity*, W. L. Craig argued that this would leave us with certain absurdities to the effect that there can be infinities of different sizes, which is clearly nonsensical. To mention one of these alleged absurdities which Craig attributes to al-Ghazali,

Jupiter revolves once every twelve years, Saturn every thirty years, and the sphere of the fixed stars every thirty-six thousand years. If the world were eternal, then these bodies will each have completed an infinite number of

---

<sup>9</sup> *Ibid.*, p. 73.

<sup>10</sup> Hilbert, (1964), p. 201.

<sup>11</sup> Craig, W. L., *op. cit.*, p. 69.



revolutions, and yet one will have completed twice as many or thousands of times as many revolutions as another, which is absurd.<sup>12</sup>

On this account, therefore, it seems unintelligible that each planet should have completed the same number of revolutions. But if the past time is infinite, that is, if the universe did not have a beginning, that would have been true.

To support this intuition, Craig suggests one think of a library with an actually infinite number of books where the books are either red or black. Given that the collection of books is infinite, no one should hesitate to think that the number of red books is the same as the number of black books, but what if one is "told ... that the number of red books in the library is the same as the number of red books *plus* the number of black books?"<sup>13</sup> The problem, therefore, is that there are actual infinities of different sizes which, being infinite, are nevertheless equal to each other.

However, it has been argued<sup>14</sup> that the alleged absurdity involved in the revolutions of the planets being equal in terms of infinity and also in the infinite number of the books of different colours is a result of improper understanding of the nature of infinity. Given that the difficulty is how we are to conceive that an infinite set of actual events can be equal to its infinite sub-set, once again, the Cantorian set-theoretic intuitions might help one to show how such a seemingly implausible contention can be made intelligible. On the Cantorian theory of infinite sets, we might equate, say the infinite set of {1,2,3,4,...} to the infinite set of {2,4,6,8,...} on the logic of set-theoretic membership by placing the member of each set in a one-to-one correspondence. Thus, although the set of even numbers is a proper subset of

---

<sup>12</sup> *Ibid.*, p. 46.

<sup>13</sup> *Ibid.*, pp. 82-83.

<sup>14</sup> See Wainwright (1982), p. 330; Mackie (1982), p. 93; Smith (1987), p. 85.

the set of natural numbers, both sets, as being infinite, are equal; no set is greater than the other. In other words, since the cardinal number of both the set of natural numbers and the set of even numbers is aleph zero there is no contradiction in their being equal to each other. By the same token, granted that the cardinal number of the set of the revolutions of each planet around the sun and of each set of books is aleph zero, it might be argued that there is not a logical impossibility in their being equal to each other. Thus, the absurdity is removed from the scene once it is properly understood that in the case of infinite sets, a set is not greater than the subset of that set.

Even though Craig thinks that such an account of the set-theoretic actual infinite on the purely formal level is not wholly unproblematic and thus not patently true,<sup>15</sup> nevertheless, as Wainwright<sup>16</sup> correctly observes, he seems to allow the logical possibility of the actual infinite as he thinks that it may be formulated as a formally consistent system. However, what Craig seems to have found really 'impossible' is that such a formal system may have an ontological bearing on the possibility of 'actual infinite'.<sup>17</sup> Presumably, therefore, to defend the real possibility of the actual infinite on the grounds of the Cantorian formal set-theoretic logic of infinite sets, for Craig, is simply to beg the question.

However, if the Cantorian account of infinity is really *not* logically impossible, then what seems to be problematic is the force of the argument against the actual infinite: what reason might one have for thinking that actual infinity is not just the case, but *cannot* be the case?<sup>18</sup> Indeed this seems to be the point of convergence in the ongoing controversy and there has been a cluster of arguments for and against possibility of the actual infinite in

---

<sup>15</sup> See Craig (1979), p. 95.

<sup>16</sup> (1982), p. 330. As Wainwright points out (*Ibid.*, p. 330), by 'logical possibility', Craig seems to have 'formal consistency' in mind.

<sup>17</sup> Craig (1979), p. 95.

<sup>18</sup> See Wainwright, *op. cit.*, p. 330 ff.

terms of, for example, whether the actual infinite can be added to, whether the dispute can be settled on purely *a priori* grounds etc. It is, however, beyond the scope of our discussion to examine them all and to settle the issue, hence I shall leave the issue as arguable<sup>19</sup> but assume, for the sake of further argument, that 'x is created if and only if x has a beginning in time'.

Before closing this section, however, I shall consider another point. Is there any reason for us to suppose that 'x creates y' does entail that there was a time when y did not exist? J. F. Ross has argued that "God did not begin to create other things *after* a state of not having created,... The Cosmos or universe, did not begin, if 'begin' requires a 'before' it...".<sup>20</sup> Hence, although the parts of the Universe might be ordered in relation of 'before' and 'after' to each other, this cannot be applied to the Universe itself, or to the whole constituents of the Universe.<sup>21</sup> But does not this entail that the Universe is co-eternal with God? If yes, how are we to understand "eternal creation"?

According to Ross, the Universe is eternal with God in the sense that it did not begin *after* not being, since "it was never nondenominatively true of God that He had not created anything 'yet.' That is because there can be no basis in God's reality for a 'not yet'..."<sup>22</sup>. Therefore, since there is no 'before' before the creation; it might be said, with Aquinas, "being created in the beginning of time means that the heavens and earth were created together with time"<sup>23</sup>. Consequently, on this view, although the universe is created, it is eternal in the sense that there is no time before which the universe did not exist since time itself comes into existence (simultaneously) with the universe.

---

<sup>19</sup> For this debate, see Craig (1979), pp. 65-140; Mackle (1982), pp. 92-95; Walnwright (1982); Conway (1984); Ells (1988); Craig (1985), (1991), (1993); Smith (1993); Craig and Smith (1993).

<sup>20</sup> (1980), p. 621.

<sup>21</sup> *Ibid.*, p. 621.

<sup>22</sup> *Ibid.*, p. 622.

<sup>23</sup> (1967), 1a, Q. 46. a. 3.



Both time and the universe are co-eternal with God, and indeed, this is true because there could not be a time at which God did not create anything, therefore the act of creation too is eternal.<sup>24</sup>

Once it is conceded that time itself is simultaneously created with the rest of creation, or rather that time itself is a part of creation, it seems that one can easily make sense of eternal creation. But this can hardly show that creation has no beginning. More precisely, this account seems to be somehow compatible with (2) in the sense that it assumes that even though there was no time *prior to* the divine act of creation simply because of the fact that time *itself* is a part of creation, or that time starts with very act of creation, it does not entail that the creation or the universe is beginningless. On the contrary, it shows that the whole creation including time itself has a beginning but not a temporal beginning. But, then, how are we to understand the contention that "time is created" or "time has a beginning"? It is clearly incoherent to say that there was a time when time had not started, but is it equally incoherent to maintain that time has a beginning or that it somehow started?

It seems to me that there can be some serious conceptual difficulties in understanding these claims given the fact that one can hardly make sense of the notions such as "beginning" "starting" (which are temporal notions in this context) without somehow presupposing "time". One way to understand such an assertion is perhaps to make a distinction between two different notions of time: metricated and unmetricated. The former kind of time would come into existence (therefore would have a beginning) if and only if God freely decides to create a (the) universe in which there is a temporal order (of "metricated time") which is experienced in natural laws, whereas the latter kind of time would exist only in "divine consciousness" even if God creates no

---

<sup>24</sup> If this account is in fact true it seems to have the advantage of being immune from the objection why God did not create sooner.

universe at all.<sup>25</sup> However even if we suppose that such a distinction is tenable it is clear that one can understand that "metricated time" has a beginning only if one presupposes another time-involved notion, that is, "unmetricated time".

However, there might be another way of understanding the contention that time is created together with the universe: while "creation" (of the universe together with time) has no beginning in time it is nevertheless *not* necessary. That is, the whole creation including time itself is logically contingent, and therefore it has a non-temporal beginning.

Even if we suppose that this is true, still it is hard to give an explicit account of the contention that abstract objects and necessary truths are created: either "create" means "has a temporal beginning", or "is logically contingent". Neither horn would be acceptable to the theistic activist.

### 6.3 Creation and Divine Freedom

The creation of abstract objects and necessary truths, the theistic activist says, is both eternal and necessary. But is eternal and necessary creation compatible with the theistic conception of God's being a free creator? Is not the view that, so to speak, God *must* create in conflict with the traditional theistic conception of Deity's being a "free creator"?

To start with, can action be both eternal and free? Ockham considered this point when he said,

if we hold that these are compatible -that the world was contingently produced by God, and from eternity- then we evidently have to say that the world *could* have *not* existed from eternity for this reason, that by natural or conceptual priority [as distinct from temporal priority] God *could* have *not*

---

<sup>25</sup> For such a distinction, see Swinburne (1993), pp. 218-222.

produced the world at A, since to produce it at A or not to produce it was in his will.<sup>26</sup>

And it seems to me that Ockham is basically right. There does not seem to be a manifest incompatibility between eternal creation and divine freedom provided that it is within God's freedom to create *x* or not to create *x*. Considering the fact that there is a *conceptual priority* between God and the object of creation -if not a temporal priority- implied in God's creating *x* or refraining from creating *x*, this does not seem to contradict the theistic deity's being *essentially* a free creator.

The question, however, is whether such an account of creation is applicable to the case of the creation of abstract objects and necessary truths? In other words, can we say that God was in the same way free or indifferent to the creation of the cluster of necessary beings? Not at all. For, unlike contingent beings, it has been granted that abstract objects and necessary truths exist *necessarily*. Indeed, there seem to be substantial disanalogies in this respect between necessary and contingent objects. Thus, although God was free to create or not to create even the eternally existing universe, -therefore it is conceptually possible that God could have refrained from creating it- it does not seem to be within his power not to have created abstract objects and necessary truths. Likewise, we already have seen, while it is epistemically conceivable that God could have created contingent beings otherwise, it is epistemically inconceivable how God could have created abstract objects and necessary truths otherwise. Thus, for example, it is epistemically and logically possible for God to create, or to have created three-legged human beings, it is not conceivable how God can or could have created an abstract object such as number 4 or a necessary truth such as  $2 + 2 = 4$ , otherwise.

---

<sup>26</sup> Quoted in Kretzmann, *op. cit.*, p. 29.



The theistic activists seem to have already noticed this problem as they argue that divine freedom should not be a genuine difficulty, since they think that the theistic idea of God as a free creator should be taken with reference to the physical universe, not abstract objects and necessary truths which God necessarily creates. Nevertheless, according to the theistic activists, there is a sense in which one might say that God is free even with respect to creating the framework of reality:

God's creation of the framework of reality is both eternal and necessary -it never was, never will be, and could not have been, other than it is. But there is a sense, a different sense, in which even it can be considered free. It is an activity which is conscious, intentional, and neither constrained nor compelled by anything existing independent of God and his causally efficacious power. The necessity of his creating the framework is not imposed on him from without, but rather is a feature and result of the nature of his own activity itself, which is a function of what he is.<sup>27</sup>

But how exactly can God be considered to be free with respect to the creation of abstract objects and necessary truths if the very act of creation is necessary, if they could not have failed to exist, and also could not have been other than they are? In other words, how can one think of God's being free, if it was not within God's power to do otherwise? Surely, it is a conceptual necessity to say that if *S* is free and thus not determined with respect to doing *p*, then *S* has alternatives to do otherwise than *p*, and that means there are alternative possibilities *prior* to *S*'s performing *p*. Therefore, we might say,

(3) For any *x*, if *x* is created by *S* (where *S* is God) then *x* is created by *S* freely.

Again,

(4) For any *x*, *x* is created if and only if there are alternatives to *x*.

---

<sup>27</sup> Morris and Menzel, (1986), p. 357

But (3) and (4) together entail

(5) For any  $x$ ,  $x$  is created by  $S$  (where  $S$  is God) if and only if  $x$  is contingent.

We might articulate the issue of divine freedom in this connection in at least two different senses: for God to be free with respect to performing a creative act either (i) there must be alternatives available to him with different outcomes such that he can or could have chosen to create another framework of reality or (ii) he must be free with respect to the very act of creation to the effect that he can or could have refrained from creating any such framework at all. Clearly enough, on the theistic activist account, God seems to be deprived of freedom in both respects. Both (i) and (ii) are irrelevant to the case of abstract objects and necessary truths. But then, if there was *no* alternative for God and he cannot create the necessary framework otherwise, or refrain from creating it at all, it simply must follow that God is not free in this respect. If so, the so-called framework of reality, if created, is not necessary; and if it is necessary, then it is uncreated.<sup>28</sup> Granted that the reference of necessary truths is the ontology of abstract objects which exist necessarily and have their properties and relations essentially, then there are good reasons for thinking that they are uncreated.

Of course, it seems reasonable to think that there is a sense in which one might consider God's being free in that the necessary framework is not imposed upon God from outside, or that it is the result of "a function of what God is". As the preceding considerations show, however, most of the difficulties remain with the mysterious understanding that such a divine self-functioning

---

<sup>28</sup> I have already noted that if the evidence (ground) produced for necessary truths is itself a matter of contingency, then it must follow that they are not necessary at all.

could be taken as an *intentional* free act, to the effect that it can be expressed in terms of "creation".<sup>29</sup>

So, the theistic account of the creation of the framework of abstract objects and necessary truths, once again, seems to be inadequate. For we have seen that 'creation' can be a divine free act only if there is at least a *conceptual* or *logical* priority between God and the objects of creation in order to understand how God could have freely done otherwise; yet, in the case of the necessary framework, it is hard to see how there could have been even such a priority<sup>30</sup> to the effect that it was within God's freedom to have done otherwise.

To be sure, in 4.4, we have granted that necessary truths arise out of God's self-thinking, and therefore that there is a *logical priority* between God's thinking and the objects of his thought, viz. the ideas in his mind. It is true that, in thinking his ideas, God becomes cognitively identical with them but, given that it is (the facts about) his ideas (concepts) which make the propositions in question (his thoughts) necessarily true, then one cannot, in a circular way, say that it is God's thinking which brings about (the very facts about) his ideas. So, from the fact that the divine intellectual activity is necessary for there to be necessary truths, it should not be concluded that it is such an activity which makes them necessarily true.

On the other hand, even if God's thinking is necessary for there to be necessary truths this does not mean that he was somehow free to have done

---

<sup>29</sup> On the other hand, if the theistic activist conception of creation with respect to the necessary framework entails that creation is a necessary divine act, then, as S. A. Davison (1991, p. 495) rightly pointed out, this seems much more closer to the neo-platonic conception of "emanation" than the theistic notion of creation.

<sup>30</sup> In fact, Morris and Menzel (*op. cit.*, p. 359) think that there may be no temporal priority, but that there is a conceptual, or in their terms, a metaphysical priority of God's conceiving activity to the existence of the necessary framework. Even so, this does not mean that it was within God's freedom to have done otherwise.



otherwise in the way he was free in creating the world otherwise or in refraining from creating any world at all. This, we might say, is simply because of the fact that God has the property of being omniscient essentially, whereas he has the property of being a creator contingently. As a result, therefore, if creation is a free act, there are good reasons for thinking that abstract objects and necessary truths could not have been created.

#### 6.4 Creation and Divine Nature

It has been pointed out that, on the theistic activist account, for any abstract object and necessary truth to be created it is sufficient for it to be thought by God; it is God's intellectual activity which is held to be responsible for the act of creation. In other words, God's conceiving activity is tantamount to the divine activity of creating abstract objects and necessary truths. In Morris and Menzel's terms, this is a natural consequence of the "function of what he [God] is".<sup>31</sup> Thus it is "a function what God is" that it is necessarily the case that the law of contradiction is true, or that 2 is smaller than 5, or again that  $4 + 4 = 8$ . Again supposing that the existence of the necessary framework naturally flows from God's own nature, it would be inconceivable to detach the existence of the necessary framework from God's existence; thus it cannot be the case that God exists and abstract objects and necessary truths fail to exist, or exist differently from what they are.

But can an activity thus described be 'creation'? That is, is the concept of creation used properly when applied to God's functioning, his nature or himself? This might be more accurately understood along the following Kantian lines: why should we think, for instance, that we create necessary truths such as that  $2 + 2 = 4$  simply because of the fact that it is a part of our nature that we take  $2 + 2 = 4$  to be necessarily true? For a moment, let us

---

<sup>31</sup> *Ibid.*, p. 357.

suppose that God's relation to the necessary framework is akin to our relation to the Kantian *a priori* / necessary categories and concepts, and likewise that the whole set of abstract objects and necessary truths composes God's *a priori* conceptual scheme in the sense that they are a result of the function of his nature. And moreover, given that the Kantian *a priori* categories and concepts are essential to the human mind, similarly let us suppose that the necessary framework is an essential part of the divine mind's functioning in this way rather than the other. Following out these lines of thought, abstract objects and necessary truths are considered to be the outcome of the function of certain minds, either divine or human. Given that this analogy *does* justice to the theistic activist account of the relation between God and the framework of abstract objects and necessary truths, we might now ask whether it would be accurate to think that, on this Kantian analogy, we create our *a priori* conceptual scheme, or the necessary framework which is essential to our intellectual activity, and thus a product of the functioning of the human nature? If the answer is "no" -to me it is pretty clear that it should be- it becomes hard to see how the theistic activist assertion that God is creatively responsible for the existence of the necessary framework in the sense that it is "a function of what God is" could be true. Moreover, if the necessary framework is a function of what God is, then how are we to understand the very nature of such a functioning? On which grounds does God, so to speak, cause his nature to function his nature so as to create the necessary framework?

To employ the concept of creation for the existence of the framework of abstract objects and necessary truths seems to generate some more difficult questions. Thus for example, God himself seems to have some essential as well as accidental properties, thus it is an essential part of the divine nature that he is omniscient or omnipotent as it is a contingent property of God that he is the creator of this world. But what matters here is the set of divine essential

properties which are considered to be constitutive of the divine nature. Do they fall within the scope of the created framework of necessary truths and objects? If the answer is yes, in what sense can God's own necessary and eternal intellectual activity be responsible for his own essential properties? For, if this were so, would it not follow that God would be creatively responsible for his own nature, and perhaps therefore for himself? And is not that an unacceptably circular account?

The principal difficulty, as seen, concerns the question of "how can God himself *be* the instantiation of the items that he creates"<sup>32</sup>, and it seems hard to give a satisfactory explanation for this claim. To begin with, such a view makes it obligatory for the theistic activist to account for the divine essential properties in terms of creation. But to think that God creates his own essential attributes, given they crucially differ from the rest of abstract objects, requires someone to demonstrate that there is a sense in which we might think that God can reasonably create his own nature.

However, if God is essentially omnipotent, omniscient and wholly good it would follow that God is necessarily the way he is, in other words, God cannot exist without his nature. There are some properties which are requisites of God and without exemplifying them he cannot be himself, God. Therefore,

(6) Necessarily if God exists he exemplifies his nature, viz., his essential properties.

But, on the other hand, according to the theistic activism,

(7) Necessarily for any abstract object *O*, and necessary truth *T* God is creatively responsible for the existence of *O* and *T*.

But (6) and (7) together entail that,

---

<sup>32</sup> *Ibid.*, p. 359.



(8) Necessarily God is creatively responsible for his essential properties.

Now, if God's individual nature, or essence consists in the conjunction of all those properties he has and they are necessarily exemplified in him, then if God creates his essential properties, this seems to entail that God creates his own nature. But what exactly could that mean? Can God really create his nature?

Morris and Menzel's rejoinder to this question is in the affirmative, and for them, there is no absurdity or unacceptable circularity about God's creating his nature when properly understood. Indeed, according to them, this can be better understood analogously to the following thought experiment. Suppose there exists a materialisation machine which has the ability to create matter *ex nihilo* and stands to its products in a relation of continual creation. Having been used for a while, the knobs of the materialisation machine begin to wear out such that they become unusable, however, they are set to produce new knobs, and the old knobs are changed with the new ones. And in the end of this process, the materialisation machine similarly continuously creates all of its parts. If this thought experiment is acceptable, then, according to Morris and Menzel, there is no reason why God's creating his nature should not be conceivable.<sup>33</sup>

This thought experiment is meant to show the conceivability of God's continuously creating his nature, and in this respect, it seems to share a parallelism with the argument that if God can cause his existence at each moment of time, and given that time has no beginning, then he can be the cause of his existence at all moments of time. In other words, since God exists at *all* times, for any time *t*, God's creative activity at *t-1* can be taken to be causally responsible for God's existence at *t*. Accordingly, for every moment of

---

<sup>33</sup> (1986), p. 359.

time  $t$  at which God exists, God's creative activity prior to  $t$ , namely  $t-1$ , would account for his existence.<sup>34</sup> Then, it would seem that God exists because he has caused himself to exist, and consequently, it would be true that God owes his existence to his creative activity.

With Swinburne, however, we might think that this argument depends for its validity on the principle that,

(9)  $S$  is the cause of the occurrence of a collection of states if and only if it is a collection of the causes of each.<sup>35</sup>

According to Swinburne, (9) holds for any finite or infinite set of effects, where none of the causes of any members of the collection of effects is itself a member of the collection of effects. Thus for instance, if the cause of  $a$  is  $a'$ ,  $b$  is  $b'$ , and  $c$  is  $c'$ , thus  $a$ ,  $b$ ,  $c$ ,  $a'$ ,  $b'$ , and  $c'$ , being distinct states, then  $a'+b'+c'$  is the cause of  $a+b+c$ . But, given the cases where the cause or part of the cause of some member of a collection of effects is itself a member of that set<sup>36</sup>, Swinburne maintains

when  $b$  is the cause of  $a$ , and  $c$  is the cause of  $b$ , we say that the cause of  $a+b$  is  $c$ , not  $b+c$ . If  $c$  is the lighting of a fuse,  $b$  is an explosion caused by  $c$ ,  $a$  an explosion caused by  $b$ , then the case of  $a+b$  is just  $c$ . Again if  $b$  and  $c$  are conjointly the cause of  $a$ ,  $d$  is the cause of  $b$ , and  $e$  is the cause of  $d$ , then the cause of  $a+b+d$  is not  $b+c+d+e$ , but merely  $c+e$ .<sup>37</sup>

Hence (9) must be modified as,

---

<sup>34</sup> See Swinburne, (1977), pp. 259-263; also, see Leftow (1990b), p. 205.

<sup>35</sup> Swinburne, *op. cit.*, p. 260.

<sup>36</sup> *Ibid.*, p. 261.

<sup>37</sup> *Ibid.*, p. 261.

(10) *S* is the cause of the occurrence of a collection of states if and only if it is a collection of the causes of each, which are not members of the former collection.<sup>38</sup>

Accordingly, one thing seems essential to this view of causation: the cause must lie outside the series. If there are no causes outside the series, then the whole series has no cause; thus for instance, if the earliest state of the universe has no cause, the whole series has no cause.<sup>39</sup> Now, given that this account of causation is true, it seems to me that, Swinburne is basically right in his argumentation that,

although we could then say that God was the cause of his possessing those properties at any given moment of time, because (in virtue of possessing those properties) he brought it about at the prior moment that he possess at the succeeding moment; what we could not say is that he is the cause of his eternal possession of those properties.<sup>40</sup>

The real question, therefore, is not whether God once being God can maintain his subsequent existence, but rather, whether there was a time, or metaphysical priority when, so to speak, God was not God, but subsequently he caused his nature, therefore created himself. This seems to be just impossible for the simple reason that God presupposes and thus needs his nature in order to create his nature/ himself.<sup>41</sup> That is to say, God's exemplifying his nature must be *prior* to creating his nature, and this is unacceptable. It seems to me that this conclusion by no means applies to Morris and Menzel's analogical thought experiment of the materialisation machine, which at best demonstrates the possibility of divine "self-preservation" rather than "self-creation" which is the real issue.

---

<sup>38</sup> *Ibid.*, pp. 261-262.

<sup>39</sup> *Ibid.*, pp. 261-262.

<sup>40</sup> *Ibid.*, p. 262.

<sup>41</sup> Leftow (1990a), p. 588.



Morris and Menzel can hardly object to this conclusion on the grounds that such an argument presupposes a temporal priority of God's creating his nature inasmuch as their analogy of the materialisation machine is after all a temporal analogy and this, in a sense, seems to show that on the notion of creation cannot be devoid of temporal implications. Furthermore, even if one agrees with the theistic activist that there is not a temporal priority in God's creating his essential properties -his nature- since there is a conceptual or logical priority between God and his creative action, to say that God creates his nature would imply that God could have refrained from creating his nature and also that he could have created his nature other than it is. But this would imply that God's nature is logically contingent, which clearly contradicts the very theistic activist claim that God is essentially what he is.

But given that on the theistic activist understanding it is inevitable that God creates his nature, does this necessarily lead us to think that God creates himself? It does not, according to Morris and Menzel. Because,

God stands in a relation of logical dependence to his nature (...). His nature stands in a relation of causal dependence to him. It simply does not follow that God stands in a relation of causal dependence to himself. Relations of logical dependence are always transitive. Relations of continuous causal dependence are always transitive. But we have no reason to think that transitivity always holds across these two relations. If God creates some bachelor, the existence of this bachelor is logically sufficient for the existence of some unmarried man. It follows that God creates some unmarried man. But the transitivity we thus see across the causal and logical dependence relations holds only in case the unmarried man is one and the same individual as the bachelor. Unless the doctrine of divine simplicity is true, God is not identical with his nature. Since we have rejected the doctrine of divine simplicity, we can reject the inference that from God's nature causally depending on God, and God's logically depending on his nature, it follows that God causally depends on himself. Thus the view that God is the absolute creator of everything distinct from himself does not entail that God is self-caused, or self-created.<sup>42</sup>

---

<sup>42</sup> Morris and Menzel, *op. cit.*, p. 360

Crucial to the above argument is the supposition that God is not identical with his nature. If that is true, then, on Morris and Menzel's account, it goes without saying that even if God causes his nature to exist -creates it-, it does not follow that he causes himself to exist, and hence that he creates himself. But how could we understand this if God's nature entails the existence of God or if God is God if and only if he exemplifies his nature? In other words, it is hard to see how God and God's nature can be conceived to exist apart from each other. If God is *essentially* what he is, and if he cannot be what he is unless he has his nature or unless his essential properties are exemplified, it necessarily follows that the existence of God's nature entails God's existence, and *vice versa*.<sup>43</sup> The basic difficulty here is that, unlike contingent beings whose essences (natures) are contingently exemplified, God's individual essence (his nature) is necessarily exemplified.

On the other hand, God's creating his nature implies that God makes his existence possible, but this is clearly false for the simple reason that God cannot make his existence possible unless he already exists. Moreover, one might rightly think that if *x* is God and *x*'s existence is merely possible, then something other than *x*, say *y*, must exist in order to actualise divine possible existence. But this clearly contradicts the very theistic *aseity* intuition that God exists totally independent of all other things and that although God's existence accounts for the existence of anything distinct from God, by contrast, nothing accounts for his existence. That is why, although one can push a regress for the explanation of anything distinct from God which stops in God, there cannot be any regress which goes beyond God to explain God's own existence. All explanatory regress therefore ends in God. Nothing -causal or whatever- can account for God's own existence; his existence does not

---

<sup>43</sup> See Leftow, (1990b), p. 201.

depend upon anything other than himself, he is therefore in a sense *self-dependent*.<sup>44</sup> Accordingly, it is wrong to think that God creates his nature.

Even though God and his nature cannot exist apart from each other, however, it seems to me that one can rightly object to the identification of God with his nature on some other grounds. Thus, given that properties, God's essential properties included, are abstract objects and that God's nature is the conjunction of all his essential properties, it would be agreed that God's nature itself is a property. But if God's nature is identical with a property, as Plantinga pointed out, "then he isn't a person but a mere abstract object; he has no knowledge, awareness, power, love or life."<sup>45</sup> But this is unacceptable.

Essential to such an argument is that God, as an actual agent, cannot be identical with his mere abstract nature, and this seems to entail that there is a clear distinction between a property *F* and the exemplification of *F*. And crucial to such a distinction is the supposition that properties -abstract objects- are not self-exemplifying entities, that is to say, redness is not red, knowledge does not know, love does not love, etc.<sup>46</sup> Thus, one might say, even *though divine essential properties are necessarily exemplifying they are not self-exemplifying*. That is, God exemplifies his essential properties such as being omniscient in every possible world but omniscience -as a mere abstract object, without being exemplified by an actual being- does not know.

Accordingly, it seems that the theistic activist can rightly challenge the identification of God with his nature, but does this enable him to argue that God is creatively responsible for his essential properties, and therefore his nature? Of course not. For, as has already been pointed out, to say that God creates his essential properties is to say that God is creatively responsible for his nature, and there are good reasons for thinking that if God is creatively

---

<sup>44</sup> See Leftow, (1990a), pp. 584-590.

<sup>45</sup> (1980), p. 47.

<sup>46</sup> See Wolterstorff, (1991), p. 548.



responsible for his nature, he could have created his nature other than it is, and also he could have refrained from creating his nature. In brief, such a thesis is clearly false for two simple reasons: (i) God is essentially what he is, that is, God cannot be God unless he has his nature, and (ii) God can be able to create something if and only if he exists, and he exists if and only if he exemplifies his nature; therefore he cannot create his nature.

In conclusion, even though the theistic activist view that the reference of necessary truths is divine concepts such that "he cannot annihilate or alter them intrinsically"<sup>47</sup>, at first sight, seems to satisfy our realist considerations about abstract objects as ideas in the mind of God, nevertheless this is not the case. Some important difficulties arise from the improper use of the concept of 'creation'. Thus, first of all, abstract objects and necessary truths, as seen, could not have been created if 'create' either means have 'a temporal beginning' or 'a non-temporal beginning'. That is, abstract objects and necessary truths can neither 'have a beginning in time' nor 'be logically contingent'. Secondly, although it is true that one might avoid the problems facing the Cartesian view by thinking that God *necessarily* creates abstract objects and necessary truths, this seems to contradict the theistic conception of God as a free creator. More importantly, if we consider that abstract objects are created by God's self-functioning, it then becomes difficult to understand the very nature of such a being. Thus, since God himself has certain properties constitutive of his nature, the theistic activist view leaves us with the incredible consequence that God might have created his nature. Given all this, one can rightly conclude that God cannot be creatively responsible for the necessary framework (his concepts and necessary thoughts) *via* his intellectual activity and therefore that one should take leave of 'creation' in regard to abstract objects and necessary truths.

---

<sup>47</sup> Morris and Menzel, *op. cit.*, p. 357.

**CHAPTER SEVEN**  
**DIVINE CONCEPTUALISM REVISITED**

## 7. DIVINE CONCEPTUALISM REVISITED

In 4.4, following a pattern of thought put forward by Plato and Plotinus, I argued that the problems facing the realist ontology of abstract objects, which we took to be the proper of reference of necessary truths, can be overcome when this ontology is construed as ideas in the mind of God. Such a position was designated as "Divine Conceptualism" which, I think, not only provides an explanation for our understanding of the interconnectedness of abstract objects and therefore of the nature of necessary truths but also offers an answer to the epistemological problem of abstract objects and necessary truths.

Having examined two accounts which, on the other hand, relate abstract objects and necessary truths to God via his creation, we have seen that they fail to capture our realistic intuitions about the ontological and modal properties of abstract objects and necessary truths, and also they are rendered implausible by the problems stemming from the possible implications of the concept of 'creation'. However, divine conceptualism has not so far been ruled out. But, does divine conceptualism avoid the problems facing the creationist approaches?

Although divine conceptualism is in agreement with both the Cartesian voluntarism and theistic activism that God is the ground of abstract objects and necessary truths, it nevertheless differs from the Cartesian voluntarism in repudiating the idea that God creates (abstract objects and) necessary truths or that

- (1) For any necessary proposition  $p$ , it is God's will which makes  $p$  necessary, therefore,  $p$  is necessary if and only if God wishes  $p$  to be necessary;



and differs from theistic activism in rejecting the crucial equation that

(2) For any abstract object *O* and necessary truth *p* to be created is to be thought by God necessarily and eternally.

By rejecting (1), it seems to me, the divine conceptualist is able to sidestep the aforementioned absurdities facing the Cartesian voluntarist. On the divine conceptualist account, it is/ was not within divine choice to have changed the ontological and modal properties of abstract objects; necessary truths therefore show the limit of divine power and of all possibilities. However, from this, it should not follow that God is somehow subject to certain external limitations, since what sets the boundaries of possibilities is the divine concepts (ideas) and their intrinsic properties and the relations obtaining between them, which God has in his mind by his nature.

The divine conceptualist and the theistic activist have in common that both reject (1), and also take abstract objects, which are the reference of necessary truths, to be somehow grounded in the divine intellect. The divine conceptualist disagrees with the theistic activist on (2). Thus the divine conceptualist thinks that (i) the theistic activist equation that God's thinking of an abstract object *O* or a necessary truth *p* eternally and necessarily is God's creating of *O* or *p*, is invalid, and therefore such a thing cannot legitimately be characterized in terms of creation; and (ii) since the very idea of creation (where the act of creation is taken to be a free act) implies contingency in that anything created may have not been created or could have been created otherwise, it cannot be applied to the case of abstract objects and necessary truths; they do not fall within the scope of creation whatsoever. And more importantly, (iii) since the divine conceptualist thinks that these ideas are in the mind of God because of his nature it rejects the theistic activist view that they are the products of the divine intellectual activity.

On tentative grounds we have seen that abstract objects as the reference for the claims of necessary truths are best conceived as ideas in the mind of God. Accordingly, we might say that they depend upon God's mind for their existence in the sense that ideas (mental objects) cannot exist without a mind, however, this does not mean that he is somehow causally responsible for their existence. It is true that God is cognitively identical with the ideas in his mind eternally and necessarily inasmuch as he is essentially omniscient, but it is equally true that the objects of his cognition are *logically* distinct from his cognition. This leads us to think that God's having these ideas in his mind is simply a brute fact about him.

Nevertheless, there are good reasons for thinking that the ontological and modal status enjoyed by abstract objects is retained on this picture inasmuch as they are identified with the ideas in the mind of a being, God, who is necessary and Ultimate. Also, since God is essentially what he is and has these ideas in his mind by his very nature, his concepts are essentially as they are, that is, they have their intrinsic properties and relations necessarily.

## 7. 1 Divine Conceptualism Characterised

Crucial to the divine conceptualist view, as seen, is the view that the reference of necessary truths is the ontology of abstract objects as conceived as ideas in the mind of God. The ontology of abstract objects thus turns out to be the divine mental ontology, and therefore what is responsible for the ontological and modal properties of necessary truths is the nature of divine concepts. Accordingly, propositions are to be identified with the divine thoughts which are the outcome of God's self-thinking. However, since God eternally and necessarily thinks himself, propositions too exist eternally and necessarily.

However, one should distinguish the question of the necessary existence of propositions from that of their alethic modal properties. Thus, for example, it is one thing to think that the proposition that

(3)  $2 + 2 = 4$ ,

as an abstract object (a divine thought) exists necessarily but still another to think that such a proposition is necessarily true. Thus, it might be said that even though every proposition has the property of existing necessarily, not every proposition is necessarily true as there is a *prima facie* distinction between necessary and contingent propositions. Thus, for example, while a proposition such as (3) has the property of being true necessarily, a contingent proposition such as

(4) Plato is the teacher of Aristotle

has the property of being true accidentally or contingently. Let us first consider the ontological issues: exactly in which sense do propositions exist?

Granted that propositions are the outcome of God's eternally and necessarily thinking his ideas, we might think that all propositions, as divine thoughts, depend on God's thinking for their existence. Therefore,

(5) Propositions exist if and only if they are thought (entertained) by God.

Indeed (5) can also be backed up by the general conviction that propositions are to be conceived as possible objects of beliefs in that they exist if and only if they are either believed or disbelieved by a person or mind.<sup>1</sup> Thus, as Plantinga writes, it might "seem just crazy to suppose that propositions could exist quite independent of minds or persons or judging beings."<sup>2</sup>

---

<sup>1</sup> See Pollock (1984), pp. 7-8.

<sup>2</sup> (1982), pp. 67-68.



However, Frege objects to the identification of propositions with certain mental dispositions on the grounds that if propositions were the mental contents of some mind, it would be difficult or impossible for more than one person to grasp same the propositional content; propositions could hardly have been, as an objective fact, the subject of an intersubjective communication.<sup>3</sup>

Divine conceptualism is invulnerable to this objection. From the fact that propositions are identical with God's thoughts it does not follow that they cannot be the subject of intersubjective communication; on the contrary, it can rightly be argued that since propositions thus conceived are objective in the sense that they exist independently of other contingent minds, it is more intuitive to think that such an objective domain of understanding, the divine mind, should be the source of our perceiving propositions than a mind-independent realm of propositions. This should be more evident when we consider how the epistemological difficulties facing a realist view of abstract objects conceived of as existing independent of God, may be avoided on the divine conceptualist account where our grasp of abstract objects and therefore propositions is understood to be a result of some kind of divine action on us. Thus, given that propositions are divine thoughts, one might say, to grasp a proposition is to have a divine thought communicated to one.

There is, however, another Fregean<sup>4</sup> objection to the identification of propositions with certain mental contents. That is, if we are to think of propositions as somehow the objects of thought of some mind then there is the risk of falling into the trap of psychologism. Given that what propositions express, the content of propositions, is objective, then their truth and falsity does not change from person to person; people's beliefs concerning

---

<sup>3</sup> See Frege (1956), pp. 27-29.

<sup>4</sup> See *ibid.*, *passim*.

propositions are clearly subjective, therefore, the same proposition could be held true by one person but held to be false by the other.

It seems to me that Frege's worries are well-justified. True, it is a fact that we are easily mistaken about the truth-value of propositions, we hold many true as well as false beliefs, but that does not affect the truth value of propositions; thus for example, that Tom believes that *p* does not make *p* a true proposition or *vice-versa*. However, since the divine conceptualist thinks that such a person cannot but be a necessary mind, God, who is omniscient, she can satisfactorily argue that divine conceptualism is invulnerable to Frege's objection. Since the divine conceptualist identifies propositions with God's thoughts, there is no reason for thinking that God might have false beliefs. Indeed, if God is by definition omniscient it is not just unlikely that he holds false beliefs, but impossible; hence there is every reason to suppose that his beliefs are objective in the strictest sense.

In fact, such a divine conceptualist picture also sheds light upon the divine self-knowledge. Thus, since God is essentially omniscient he is necessarily self-aware; that is, he has complete self-knowledge. God believes of himself that he exists necessarily, he is omnipotent and omniscient etc. Let us call God's knowledge of himself "Divine knowledge *de se*". Although every subject (self) *S* (other than the divine self) has certain beliefs or knowledge of herself to some extent and *S*'s beliefs of herself might be incorrigible for *S*, this, nevertheless, does not mean *S* is infallible in this respect. There might be a lot of false beliefs which *S* ascribes to herself. Then, it is hard to see how *S*'s self-knowledge can be complete. However, since God is omniscient and therefore infallible in this respect, he cannot possibly ascribe false beliefs to himself; his beliefs of himself are, so to speak, *de re* (facts) of himself.<sup>5</sup> Therefore, only God has complete knowledge of himself.

---

<sup>5</sup> For a general account of *de se* propositional attitudes, see D. Lewis (1979), pp. 133-159.

However, not all propositions and therefore not all divine thoughts are necessarily true. The reference for the claims of necessary truths, it has been argued, is the ontology of abstract objects conceived as ideas (concepts) in the mind of God. Now, if what makes a divine thought necessarily true itself is a mental state of affairs about divine concepts then we might characterize necessary truths such as

$$(3) 2 + 2 = 4$$

as divine conceptual truths where, since God is eternally and necessarily engaged in thinking his concepts, his thinking of (3) is cognitively identical with facts about the concepts involved in (3).<sup>6</sup> That is, since God thinks that  $2 + 2 = 4$  eternally and necessarily, it cannot be the case that he thinks that  $2 + 2 = 4$  without at the same time recognizing that  $2 + 2 = 4$  is the case, that is, that it is true.

In other words, the truth and necessity of (3), as a necessary divine thought, is the function of divine concepts where "the number 2, the number 4, the relation of addition, and that of equality are all divine concepts"<sup>7</sup>. But how about contingent truths such as

(4) Plato is the teacher of Aristotle?

Is (4) a conceptual truth? It is hard to answer this question in the affirmative, because it is evident that none of the terms involved in such a proposition seems to make it true. Nothing about the individual essence of Plato seems to make him a teacher let alone making him the teacher of Aristotle.

However, given that all propositions (necessary or contingent), as abstract objects, exist necessarily, we might say, even though contingent

---

<sup>6</sup> Despite the clear resemblance between this view and the identity theory of truth which identifies facts with true thoughts, the divine conceptualist thinks that there is a logical distinction between a divine thought and what makes it necessarily true.

<sup>7</sup> Morris and Menzel *op. cit.*, pp. 355-356.



propositions such as (4) are not true in terms of divine concepts, they depend upon the divine mind for their existence.

Thus, we might say that God's thinking of propositions comes in different grades of divine propositional attitudes such as believing, entertaining, conceiving<sup>8</sup>; thus even though God necessarily thinks (entertains) all propositions, he does not believe them all. Given that propositions come in different modal grades with respect to their truth-values, the divine conceptualist can articulate this phenomenon in relation to divine propositional attitudes. Let us start with the case of contingent propositions. A proposition such as

(4) Plato is the teacher of Aristotle,

is true in only some possible worlds. In other words, one might say, (4) is true if and only if the state of affairs corresponding to (4) obtains; that is to say, it is true only if there is an actual world in which Plato *as a matter of fact* is the teacher of Aristotle. But clearly that Plato taught Aristotle is purely a matter of contingency; it could have been the case that Plato never taught Aristotle, and as a result, there are possible worlds in which (4) is indeed false. But given that God does not have false beliefs, one might say

(6) For any contingent truth  $p$ ,  $p$  is a contingent divine thought such that God believes that  $p$  if and only if God wills to actualise/create at least one possible world  $w$ , in which the state of affairs designated by  $p$  obtains, and that there is some possible worlds  $w$  in which the state of affairs designated by  $p$  fails to obtain.

Thus, although the truth of contingent propositions depends upon divine choice to create an actual world in which the corresponding states of

---

<sup>8</sup> For a detailed account of such a different gradation of divine thoughts and propositional attitudes, see Loux (1986), pp. 500- 511.

affairs obtain, necessary truths are true independently of such a divine act.<sup>9</sup> Since necessary truths remain true, so to speak, on all divine interpretations, therefore, God necessarily believes them. Necessary truths thus seem to have a special status in the divine intellect. To mark this difference one might say,

(7) For any necessary truth  $p$ ,  $p$  is a necessary divine thought such that God strongly believes that  $p$ .<sup>10</sup>

But is it correct to characterise God having strong beliefs and presumably weak beliefs? It does not seem so, for we might rightly think that such different gradations of belief states have rather anthropomorphic connotations; perhaps we hold strong and weak beliefs because we are not in an epistemically perfect condition to see whether our beliefs are justified and therefore true. But this cannot be true of God, hence, it seems to be more accurate to follow Plantinga<sup>11</sup> in saying that it is a part of divine nature to believe necessary truths, therefore we might rephrase (7) as

(7\*) For any necessary truth  $p$ ,  $p$  is a necessary divine thought such that it is a part of God's nature to believe that  $p$ .

In a word, propositions as abstract objects enjoy the status of necessary existence simply because of the fact that God eternally and necessarily thinks (entertains) them; and some propositions enjoy the status of being necessarily true simply because of being divine conceptual truths.

Thus, there was no time when God did not entertain the thought that *Plato is the teacher of Aristotle* or did not believe that  $2 + 2 = 4$ , even though

---

<sup>9</sup> Thus, as Peikoff notes, in " ...the dualism of the Divine Intellect and the Divine Will the former gives rise to necessary truths, the latter, to the contingent truths." (1984, p. 31). See also Morris and Menzel *op. cit.*, p. 355.

<sup>10</sup> Such a description of necessary truth in terms of "strong divine beliefs" is introduced in Loux, *op. cit.*, p. 510.

<sup>11</sup> (1980), p. 145.

there was a time when neither Plato nor Aristotle existed or  $2 + 2 = 4$  was not exemplified. It is therefore inconsistent with the nature of God to fail to entertain that *Plato is the teacher of Aristotle* or to believe that  $2 + 2 = 4$ , even though he could have believed the former otherwise given that he could have created another possible world in which the state of affairs of Plato's being the teacher of Aristotle does not obtain; but clearly he could not have believed otherwise in the case of the latter. For the equality relation (which happened to be expressed in the conventional notation "=") obtaining between "2 + 2" and "4" is a necessary relation while the (tutorship) relation taking place between Plato and Aristotle is a contingent one.

So, it is correct to say that even though all abstract objects exist in the divine mind, not all of them are actualised/ exemplified. This seems to shed light on the divine conceptualist conception of *unactualised possibilia*, that is, possible worlds, possible state of affairs, possible individuals etc., as there are unexemplified properties such as, the property of being a "winged horse" which has an intermediate position between what actually exists and what is simply non-existent which one cannot even think of.

Following the modal actualist account of the unactualised but possible objects,<sup>12</sup> namely that they are merely abstract objects, the defender of "divine conceptualism" could extend his basic view to the domain of unexemplified objects by maintaining that like the rest of abstract objects, they are necessary beings and therefore are ideas in the mind of God.<sup>13</sup> Indeed that the ontological basis of possible but unexemplified objects is *grounded in* God's mind leads us to the threshold of the traditional theory of "exemplarism", according to which all abstract objects or the ideas (properties, exemplars, or individual essences) of all possible beings exist eternally in God's mind; and

---

<sup>12</sup> See Plantinga (1976), p. 272.

<sup>13</sup> Cf. Rescher (1973), pp. 166-181.



among these eternally existing exemplars in the divine mind God chooses what he wishes to create/ exemplify.<sup>14</sup>

Consequently, divine conceptualism, by grounding abstract objects in the mind of God in terms of divine ideas, takes God to be the source of all modalities, necessities and possibilities. In so doing, the divine conceptualist thinks that abstract objects and necessary truths can be essentially as they are, and thus be objective in the strictist sense by reference to the ideas in the mind of God. Divine conceptualism can therefore be characterised as "conceptual realism" of a special kind. Thus divine conceptualism both presupposes and rejects a realism in that it acknowledges the existence of abstract objects independently of the contingent instances exemplifying them, but also denies that abstract objects exist independently of God's mind. Therefore, divine conceptualism does not affirm a nominalistic ontology according to which there are only *substances*, therefore there are no such things as abstract objects. However, it is correct, in a sense, to think that divine conceptualism too favours the view that in fact only substances exist but this does not entail that its ontology is nominalistic; for, as seen, on the divine conceptualist view, abstract objects exist and indeed exist necessarily.

What needs to be seen, therefore, is that the ontological domain of abstract objects is by its nature different from that of substances in that while the former is entirely mental, the latter is non-mental. While abstract objects are mind-dependent, substances exist mind-independently.<sup>15</sup> In so doing,

---

<sup>14</sup> However, although the traditional theory of "exemplarism", as pointed out, has a great explanatory force and rather interesting implications on some theistic problems, it has been argued that it involves some other important difficulties such as the difficulty of making sense of possible but unactualised objects, or the problem of identifying objects across possible worlds, etc. However, this is a matter of a separate debate. For such a discussion, see J. S. Ross (1986), pp. 315-314; and L. Zagzebski (1989), pp. 119-144.

<sup>15</sup> However, there is a sense in which we might think that the existence of the Forms of contingent substances as ideas in the mind of God is a necessary but not sufficient condition for the existence of contingent substances such as trees, cats and human beings.

divine conceptualism has the advantage of eliminating the troublesome ontology of the abstract in metaphysics: the mental and physical ontology are sufficient to explain whatever exists.

## 7.2 Divine Conceptualism, God and His Nature

So far I have tried to offer a general discussion of certain modal and ontological issues with the view to clarifying the ground and nature of abstract objects as well as necessary and contingent propositions in reference to the divine mind; thus, the main argument has been that since abstract objects together with their properties and relations are grounded in the mind of God in terms of his ideas, God is the source of all necessities and possibilities. However, God himself has certain properties some of which are essential to him such as being omniscient, and being omnipotent, whereas some are accidental to him such as the property of being the creator of the universe. Therefore, there are propositions which are contingently true and also necessarily true of God such as the proposition that

(8) God is the creator of the universe;

and that,

(9) God exists.

Now, the question is, how are we to consider these properties and propositions? Can we extend the basic argument of divine conceptualism to this domain? Given the basic conceptualist intuition that abstract objects are ideas in the mind of God and also that properties and propositions about God himself too are abstract objects, it must follow that the propositions (8) and (9), as abstract objects, too depend upon God's mind for their existence. To start with (8), as a contingent proposition, it depends upon the divine mind for its existence because it needs to be thought by God in order to exist. But also it is a contingent proposition in that God could have refrained from creating the

universe; there are possible worlds in which (8) is false. In the divine conceptualist terms, (8) is a contingent divine thought, therefore, given (8), God believes it only if he as matter fact actualises/ creates the universe; therefore its truth depends upon his choice whether to create the universe or not.

As for (9), it also depends upon divine thinking for its existence, but the difference is that, unlike (8), it seems to be a necessary proposition. But given that the truth of (9) is necessary, unlike (8), its truth does not depend upon a divine choice; that is to say, God does not have any alternative to believe otherwise; in simple terms, he cannot believe that he does not exist. So, (9) is a necessary divine thought and following the account of necessary divine thoughts given in (7); (9) is equivalent to

(10) It is a part of divine nature to believe that (9).

However, what seems to be puzzling about (9) seems to be its truth rather than its existence. To be sure, God's existence, therefore (9), is radically different from the rest of the necessary propositions. There does not seem to be a particular barrier why

(4)  $2 + 2 = 4$

should not be necessarily true in reference to the interconnected divine concepts, but one can hardly say the same thing for (9); it seems impossible that (9) is true in reference to the concepts involved in (9). In other words, God's actual existence cannot be grounded in his mind. As Russell puts it, "who would dare...to say that God's existence depends upon his understanding?"<sup>16</sup>. By the same token, the necessity involved in the existence of God cannot in turn be explained in reference to *de dicto* modality which is embedded in the nature of the divine mind. Even if we suppose that it is a part of the concept of "God" that he exists necessarily, and that God has such a concept eternally and necessarily in his mind, and thus that (9) eternally and necessarily true, this

---

<sup>16</sup> (1937), p. 179.



cannot explain the necessary existence of God in actual terms. God's actual existence cannot be the result of the conceptual necessity involved in (9). Such an account is therefore unquestionably circular and mistaken.

However, the divine conceptualist need not be committed to such a clearly absurd view. What the divine conceptualist is committed to is that (9), as an abstract object, is mind-dependent, therefore, he would argue that God is responsible for the existence of (9) purely on the propositional level, not for the actual state of affairs designated by (9), that is, God's (*de re*) existence. On the contrary, the divine conceptualist takes the existence of God to be the ontologically most fundamental reality of all; the *first condition* (i.e., the first actual state of affairs) which obtains necessarily, and the proposition descriptive of this actual condition, that is, "God exists" to be the first truth of all. Therefore, the proposition "God exists" can be true only if the state of affairs designated by such a proposition, as a matter of fact, obtains; that is, only if there is a God. This is true and the divine conceptualist grants the fact that although (9) depends on the divine mind for its existence not for its truth, and therefore the necessity involved in the actual existence of God is ontological, not propositional.

Indeed, the divine conceptualist thinks that *God is the unique necessary substance* whose essence and existence is inseparable whereas other substances such as human beings, cats and stones are created, contingent substances which exist only in the actual worlds in which God creates them. That is why, the essence of these substances (each of which is a necessary being) is distinct from their existence (which is a matter of contingency). However, on the divine conceptualist account, the necessity of divine existence cannot be considered in the same boat as, for instance, the necessity of a proposition such as (3); the necessity of a proposition is to be understood in reference to the nature of God's concepts; whereas the necessity of divine existence itself is to be understood in the sense that he is the ultimate being

upon whom everything else depend for its existence. This fact was clearly underlined by Leibniz: "...without him [God] there would be nothing real in the possibilities -not only nothing existent, but also nothing possible."<sup>17</sup> Without God's existence, on this view, neither can anything else exist nor be possible; his existence, ontologically, is the most fundamental fact.

But what about divine properties, notably, those pertaining to God's own nature such as omniscience, omnipotence? Given the above account that God's existence in a sense precedes everything else, then, obviously God cannot exist without exemplifying those properties which are essential to his nature. If so, how are we to say that divine essential properties depend upon the divine mind without facing the seemingly inevitable charge of circularity?

Here, it might be said that once again the circularity results from a confusion between properties as abstract objects and their actual instances. When the divine conceptualist maintains that abstract objects depend upon God's mind, he does not mean that their actual instances too depend upon God's mind. Thus, for example, even though the conceptualist thinks that properties such as green as abstract objects depend upon the divine mind, by this, he does not mean that the actual, exemplified, (concrete) greenness of actual substances such as *the actual property-instance of the tree in our garden* too depend upon the divine mind. For the exemplified (actual) property-instances depend on the divine creation, i.e., upon the divine will, rather than the divine intellect. Similarly, when the divine conceptualist says that the divine properties are abstract objects, therefore, that they are grounded in God's mind, by this he does not mean that the actual instances of these properties which God exemplifies depend upon God's mind.<sup>18</sup>

---

<sup>17</sup> (1973), p. 185.

<sup>18</sup> Note that the divine conceptualist rejects the view that properties are self-exemplifying.

Nevertheless, the divine essential properties seem to posit a special case in that while the non-divine properties, the properties of contingent substances, precede their exemplifications, this does not hold in the case of divine essential properties. On the contrary, God's exemplifying his properties seems to be at least logically prior to, so to speak, his thinking of his properties as abstract objects. But this does not seem to be a great trouble for the divine conceptualist argument that abstract objects are grounded in the divine mind save that in the case of God, *the necessary substance*, the exemplification of his properties somehow (logically) precedes their existence as concepts in his mind.

It is now time to consider a number of objections to divine conceptualism. The first one was originally raised by Russell in his criticism of Leibniz:

God's existence is deduced from the Law of Contradiction, to which it is therefore subsequent. Hence we cannot, without vicious circle, maintain that this law is only due to God's knowledge of it. Again without the law of ... contradiction, as Leibniz truly says [...], there would be no difference between truth and falsehood. Therefore, without this law, it could not be true, rather than false, that God exists. Hence, though God's existence may depend upon the law of contradiction, this law cannot in turn depend upon God's existence.<sup>19</sup>

Russell's objection, in essence, maintains that the Law of Contradiction would still have held even if God did not exist;<sup>20</sup> therefore, one might say, the existence of such a principle as an eternal (mind-independent) essence survives even if God did not exist; hence its existence is ontologically more fundamental than God's. This obviously contradicts the divine conceptualist thesis that the Law of Contradiction, as a necessary truth, depends upon God's mind.

---

<sup>19</sup> *Ibid.*, p. 180.

<sup>20</sup> See Wolterstorff (1970), pp. 292-293.



In defence of Leibniz, Adams<sup>21</sup>, taking for granted that the crucial starting-point in Leibniz's argument is the impossibility of divine non-existence, has argued that "we can intelligibly speculate about the ontological status of the Principle of Contradiction only from a standpoint in which the truth rather than the falsity of that principle is the default value"<sup>22</sup>. Thus Adams maintains that the vicious circularity would be side-stepped if we think that "the proposition 'God exists' depends for its *truth* on the truth of the Principle of Contradiction, while the Principle of Contradiction depends on the existence of God, not for its truth, but for its *reality*"<sup>23</sup>.

Adams is certainly right that one's starting-point must be the impossibility of divine non-existence, but how are we to understand the claim that the law of contradiction depends upon on the existence of God for its existence, not for its truth? What is the truth and the reality of the Law of Contradiction? Can we really separate the reality of such a principle from its truth? Yes, along the divine conceptualist line depicted above, we might think that since propositions by their very nature are mind-dependent, the proposition that *God exists* too, as an abstract object, depends upon God's mind for its existence, not for its truth as it is pretty ridiculous to say that the divine existence depends upon the divine mind; but it remains difficult to see how this account can be applied to the case of the law of contradiction, which says that  $p$  cannot be true together with  $\text{not-}p$ . That is to say, that it is *necessarily* true that  $(p \ \& \ \sim p)$  is false.

Perhaps the only intelligible way of making a distinction between the reality and truth of such a law is to say that it is one thing to say that the proposition that  $\sim(p \ \& \ \sim p)$  exists as an abstract object, but another thing to say that  $\sim(p \ \& \ \sim p)$  is true, or indeed necessarily true. Again, it makes sense to say

---

<sup>21</sup> See (1994), pp. 184-186.

<sup>22</sup> *Ibid.*, p. 186.

<sup>23</sup> *Ibid.*, p. 186.

that the reality and the (necessary) truth of  $\sim(p \ \& \ \sim p)$  is something different from the reality and truth of its instances such as the proposition that it is false that *this table is rectangular and non-rectangular at the same time*, or that *God exists and God does not exist*, but I do not see how any of these can help us to understand Adams' distinction between the reality and truth of the principle in question as such so that one might reasonably claim that it depends upon God for its reality, but not its truth.

However, it seems to me that there is another way of facing the Russellian objection. What the principle of contradiction says is that  $(p \ \& \ \sim p)$  cannot be true, therefore, the necessity here involved is *de dicto*; it is to do with necessity of the propositions. Now given the divine conceptualist account, it must follow that *it is necessarily true that  $\sim(p \ \& \ \sim p)$*  is a necessary divine thought; that is to say, it is necessarily true because it is a reflection of the divine concepts that  $\sim(p \ \& \ \sim p)$  should be true. But if the law of contradiction is to be restricted to the domain of propositions, then one cannot, with Russell, maintain that God's existence is subsequent to the principle in question; rather, it must be said, the propositions about God and presumably about his nature are subsequent to the law of contradiction.

Of course, that *it is necessarily false that God exists and God does not exist*, is subsequent to  $L \ \sim(p \ \& \ \sim p)$ , but what reasons might one have for the contention that God's own existence is subsequent to  $L \ \sim(p \ \& \ \sim p)$ ? However, the real target of the objection, one might think, is that God's existence itself exemplifies, therefore, it is an instance of the law of contradiction. But I do not see how such an objection can go through, for there is, in the actual reality including God's existence, as Wittgenstein pointed out in *Tractatus*, nothing which corresponds to the negative fact such as ' $\sim$ '.<sup>24</sup> However, the divine conceptualist thinks that ' $\sim$ ' corresponds to a reality but such a reality is

---

<sup>24</sup> (1922), § 4.0621.

mental. Therefore it seems to me that the law of contradiction finds its real force and expression in the domain of propositions, that is, of thoughts.

But if we are to restrict our discussion to the domain of propositions alone, once again, God's existence is not subsequent to the law of contradiction whereas the existence of propositions about God, as the divine conceptualist already acknowledged, are subsequent to both the existence of God and of the principle in question. However, the divine conceptualist would also think that since the necessity and truth involved in our understanding of the law of contradiction is to do with propositions, therefore, there are good reasons for thinking that it depends upon God's mind for its existence as well as the necessity of its truth which, I think, cannot be separated from each other in the present context.

The second objection to divine conceptualism goes as follows: God exists if and only if it is *possible* that God exists; that is, God cannot said to be a necessary being unless his existence is possible. But then the realm of possibilities is ontologically more fundamental than God's existence and therefore it cannot be said that possibilities depend upon God for their existence. To put it otherwise, to say that God (necessarily) exists is to say that he exists in every possible world, this, however, seems to locate God within the domain of possibilities which exists independently of God, therefore, such a domain would be ontologically more fundamental than God.<sup>25</sup> This, to be sure, is unacceptable from the divine conceptualist viewpoint, according to which God's mind is the seat of all possibilities.

Such an objection, it seems to me, is mistaken in that "possibly" cannot be predicated of a being whose existence is a matter of *de re* necessity. That is to say, since in God essence cannot be detached from existence, it simply does not make sense to say that *possibly God exists* somehow precedes *necessarily God exists*. Such a terminology, therefore, is applicable only to the beings in

---

<sup>25</sup> This objection is raised and discussed in Leftow, (1990b), pp. 208ff.



which one can draw a distinction between *essence* and *existence*, and that is to say, it can be applied only to contingent beings. Thus, for example, it can rightly be said that *it is possible that there are human beings* precedes the *actual* existence of human beings, for the essence of no human being involves his existence.

Then, since God has the property of existence *essentially*, his existence is purely actual, no possibility precedes his actual existence. So, we have to think that for any being *x*, if *x*'s existence is possible, then, in the first place, *x* itself cannot make his existence actual. Hence, *x*'s essence needs to be caused/ actualised by an actual being. This is another way of saying that the actually existing beings other than God are caused by God to exist; therefore, they are all created. But this cannot be true of God as his essence involves his existence; that is to say, he is uncaused, unactualised and therefore, uncreated. Consequently, if God's essence involves his existence, it must follow that he is purely actual and if so, possibility statements do not apply to him.<sup>26</sup>

On the other hand, since the divine conceptualist thinks that (*de dicto*) necessities and possibilities are grounded in the mind of God, he can rightly argue that it is the divine mind which delimits what can be true about possible worlds and not *vice-versa*. Indeed, it might be said<sup>27</sup> that possible worlds are the maximal sets of divine thoughts.

### 7.3 Conclusion

The basic objective of our investigation has been to provide a satisfactory *explanation* to the problem of necessity in order to see what is the ground and nature of necessity/ necessary truths and also of our knowledge of them. In so doing, we have seen that none of the non-realist theories such as

---

<sup>26</sup> Also see Leftow, *ibid.*, pp. 210-211.

<sup>27</sup> See (1986), p. 504.

naturalism, conventionalism of different kinds, and various conceptualist theories in terms of the human-mind-dependency can really do justice to our intuitions about necessary truths.

We saw in Chapter 1 that necessary truths cannot be naturalized on the grounds of an extensionalist ontology where they are considered to reflect either highly probable inductive truths or truths which are somehow more central to one's holistic web of beliefs. Thus I argued that there are certain necessary truths such as the law of contradiction which are indispensable for our thinking such that there are no conceivable circumstances in which they might be revised and therefore I concluded that necessary truths reflect the intrinsic properties and relations of intensional (abstract) objects, not those of extensional (physical) objects. Likewise, we saw in Chapter 2 that necessary truths cannot be explained by reference to a linguistic ontology, therefore they are not analytic if by this it is meant that their truth and necessity can be established solely by virtue of the meanings of the words involved where meanings are rooted in our contingent linguistic conventions. Since meanings cannot be identified with certain linguistic entities, necessary truths cannot be taken to characterize the properties and relations of certain linguistic entities; the intensional ontology in question cannot therefore be identified with a linguistic ontology. Therefore I argued that necessary truths cannot be rooted in our contingent linguistic conventions but are the essence of every possible linguistic convention; that is one cannot establish a linguistic convention without already presupposing certain necessary truths.

The problems of a conventionalist theory of necessary truths are not avoided by either the Wittgensteinian radical or anthropological conventionalism. In Chapter 3, it has been argued that one cannot show that the actual set of necessary truths is the rules of our language-game as it is hard to conceive how a radically different language-game could have possibly accommodated, say, the negation of the law of contradiction. Equally, to think

that necessary truths are constituted by the human forms of life is far from being convincing unless it is shown how radically different forms of life are conceivable. Otherwise, the anthropological conventionalist claim that there can be alternative forms of life even though they are inconceivable by us seems to face the charge of inconsistency. And this, I argued, shows that the content (meaning) of a property (intensional objects in general) cannot be an outcome of our social or anthropological agreement.

By the same token, we saw in Chapter 4 that neither the quasi-realist account that necessary truths are answerable to our actual imaginations nor the Cautious Man's attitude of holding back in ascribing necessity to necessary truths is tenable. Furthermore, the contention that necessary truths cannot be identified with the mental properties of human beings is fortified by the untenability of the anti-realist (intuitionistic) view that necessary truths are grounded in our recognitional capacities. Thus I argued that there are at least two reasons for thinking that necessary truths do not owe their existence to the mental properties of human beings: (i) necessary truths cannot be exhausted by the finite intellectual capacities of space-time bounded creatures, viz., they outrun our epistemic capacities and (ii) although it is conceivable that human beings could have failed to exist it is not thus conceivable that there were no necessary truths.

Thus, considering that necessary truths cannot be explained by reference to certain contingent facts we saw that there are good reasons for eliminating these theories in favour of realism which, in explaining necessary truths, makes reference to an ontology of abstract objects which exist necessarily and have their properties and relations essentially. Such a realist view, however, is not exempt from difficulties. A well-known problem is epistemological: how are we to explain our knowledge of abstract objects which are causally inert? Another question is metaphysical: what is the ground of the interconnectedness of abstract objects?



I have argued in Chapter 4 that the problems facing realism can somehow be overcome along a line of thought put forward by Plato and Plotinus. Thus, to provide an explanation for the interconnectedness of abstract objects, we saw how Plato and Plotinus postulate further metaphysical principles. In particular, considering the role of *nous* in the metaphysics of Plato and Plotinus, we have seen that there are good reasons for postulating a universal mind as an eternal cognizer of the Forms and also for thinking that the Forms have to be somehow internal to it.

Yet, considering that *nous* is ontologically secondary to the Form of the Good or the One, and thus ontologically derivative (somehow caused or created by the *archē*) I have argued that there are good reasons for supposing that it cannot retain the ontological and modal status of abstract objects and necessary truths. Nonetheless, I argued the problems facing such a view can be reasonably overcome if we combine our considerations about an eternal mind, *nous*, with the theistic concept of God under the label of "Divine Conceptualism".

I have also argued that divine conceptualism is preferable to both Plato's and Plotinus' accounts because of its *simplicity*; it explains the ground of abstract objects and necessary truths in reference to one being, viz., God rather than two beings, that is, the *archē* and *nous*. Indeed, by grounding abstract objects in God who is eternal, necessary and omniscient, the divine conceptualist not only retains the ontological status of abstract objects and necessary truths but also offers an answer to the notorious epistemological problem of abstract objects. Accordingly, I argued in tentative fashion that abstract objects are best conceived as ideas in the mind of God and necessary truths are best conceived as the divine conceptual truths whose necessity and truth are answerable to the nature of the interwoven divine concepts.

However, we saw that God's relation to necessary truths might call a Euthyphro-type dilemma into question: are necessary truths necessary

because God wishes them so of his free choice or are they necessary anyway such that even he cannot or could not have made them otherwise? In this connection, in Chapter 5, having examined the Cartesian doctrine of the creation of eternal truths or "Universal Possibilism" according to which, since God is responsible for the existence of necessary truths via his creation he could have made them otherwise, I argued that such an account leads us to certain consequences which are in patent contradiction with our philosophical as well as theological intuitions. Thus we saw, for example, if God is creatively responsible for necessary truths he could have made it true that it is the case that God has created necessary truths and that they have not been created, which can hardly be intelligible. The problems facing such a view cannot be resolved by "Limited Possibilism" if we assume that necessary truths are *necessarily* necessary. Likewise, we saw that such a doctrine cannot be vindicated by the contention that God's power to have made necessary truths otherwise is inconceivable to the human mind inasmuch as such a possibility is not supposed to be conceivable. Indeed, this also seems to make the Cartesian doctrine somehow inconsistent and unintelligible. These considerations, it seems to me, reinforce our realistic intuition that necessary truths could not have been created as they reflect the properties and relations of abstract objects which have been identified with ideas in the mind of God.

On the other hand, in Chapter 6, having examined Theistic Activism which advocates the view that God eternally and necessarily creates abstract objects and necessary truths in terms of his intellective activity, I argued that even if this might avoid the problems of the Cartesian voluntarism it, nevertheless, has its own problems. Thus, assuming that anything created has a beginning in time, the concept of creation remains contradictory when predicated of abstract objects and necessary truths, which cannot be said to have any beginning whatsoever. The idea of necessary creation also contradicts the traditional conception of God's being a free creator. And also,

given that God himself has certain essential properties, this obliges the theistic activist to think in a unacceptably circular way that God creates his nature. God cannot create his nature without exemplifying his nature, that is God cannot create his nature unless he already has it. Thus, if abstract objects and necessary truths are the products of, so to speak, divine self-functioning, then it becomes difficult to understand the very ground and nature of such a functioning without God having his nature (which necessitates the exemplification of his essential properties) in the first place. In this connection, I argued that even though divine intellectual activity is necessary for the existence of necessary truths it is not sufficient to explain the very facts about God's concepts which make them necessarily true. Therefore, I conclude, even though one can agree with the theistic activist on the identification of abstract objects and necessary truths with God's necessary concepts and thoughts, one should reject that this can properly be explained by reference to the traditional theistic doctrine of creation.

Having rejected the idea that abstract objects and necessary truths can be created at all, we are left with divine conceptualism. Since abstract objects and necessary truths are uncreated we should think that God has these ideas in his mind because of his very nature. However, we have seen that even though divine conceptualism, by rejecting the idea of creation, avoids the problems facing the Cartesian voluntarism and the theistic activism, it has its own problems. Thus, for example, even though one might say the proposition that "God exists" depends upon the divine mind for its existence, it is hard to see how it might depend upon the divine mind for its necessity and truth. Therefore, I have argued that since the necessity and truth of such a proposition cannot be answered by reference to the nature of the divine concepts involved, the divine conceptualist has to consider this as an exception to his general account of necessary truths. Nevertheless, we have seen that the divine conceptualist can to some extent square with this difficulty by saying



that the necessity and truth of this proposition is to be ontological rather than propositional. Another difficulty with divine conceptualism is the question of divine essential properties and the divine conceptualist has to acknowledge that they are somehow logically *prior* to their conceptualisation by the divine mind and there should have a special category in the theory proposed.

To be sure, no metaphysical theory should be expected to be free from all difficulties, and, as Oliver rightly observes, "one cannot hope to defend a metaphysical theory by constructing knock-down arguments against each of its competitors".<sup>28</sup> Presumably, therefore, one should somehow look for a powerful explanation in constructing a metaphysical theory. In this connection, to be sure, divine conceptualism underwrites a few assumptions as correct and also has its own defects. All in all, however, divine conceptualism remains the most advantageous account we have examined.

Thus, first of all, it has a *simple* answer to the Dummettian two-fold problem of necessity: the source of necessity is God, and we recognise necessary truths because of divine action on us in this respect. As an explanatory hypothesis, the fidelity of divine conceptualism to Ockham's razor should have been evident inasmuch as the phenomenon of abstract objects and necessary truths is explained in reference to only one being, God. The *simplicity* or the *ontological economy* of divine conceptualism is also evident as it eliminates the abstract ontology in metaphysics.<sup>29</sup>

Secondly, taking the abstract ontology to be the divine mental ontology, divine conceptualism explains how so-called abstract objects such as properties and propositions can be causally effective as they are conceived as the concepts and thoughts of God who is a causal power. And thirdly<sup>30</sup>, divine

---

<sup>28</sup> (1996), p. 5.

<sup>29</sup> For the role of simplicity and ontological economy in constructing a metaphysical theory, see *ibid.*, pp. 1-9.

<sup>30</sup> Cf. Morris and Menzel (1986), p. 361.

conceptualism accommodates the plausible conceptualist intuition that abstract objects and necessary truths are mind-dependent as well as the realistic intuition that they are independent of human (contingent) minds.

Divine conceptualism also seems to have some interesting implications for the theory of meaning and understanding. Given that, on the divine conceptualist view, properties are divine concepts and that the truth conditions of a property *F* can be obtained by grasping the objective sense (intension) of *F*, it would follow that in grasping the sense of a property one grasps the content of a divine concept. And thus the very phenomenon of understanding, the grasping of an objective sense, or a relation among ideas can, in turn, be seen as a matter of "divine illumination".

Consider that 'meanings' are grounded in the divine mind, still another implication of the divine conceptualism can be found for religious language and philosophical theology. Thus even though, on the divine conceptualist theory, the human mind is limited in grasping all propositional contents (divine concepts and thoughts), nevertheless there is a considerable overlap between the human and divine mind. Such an overlap, it might be argued, can provide sufficient ground for the (semi)-objectivity of the divine and human dialogue and can also underline the theocentric nature of man.

And finally, given that divine conceptualism, as a theistic hypothesis, provides a powerful explanation for the phenomenon of abstract objects and necessary truths, it seems to me that one might also consider it as an inductive argument for the existence of God.<sup>31</sup>

---

<sup>31</sup> Cf. Adams (1983), p. 52.

## BIBLIOGRAPHY



## BIBLIOGRAPHY

- Adams, R. M., (1983). 'Divine Necessity', *The Journal of Philosophy*, 80, reprinted in Morris (1987), pp. 41-53.
- (1994). *Leibniz: Determinist, Theist, Idealist*, (New York: Oxford University Press).
- Aquinas, St. Thomas, (1967). *Summa Theologiae*, Vol. VIII, T. Gilby, (London: Blackfriar's).
- Aristotle, (1941a). *Metaphysics*, tr. A. Platt, in Aristotle (1941).
- (1941). *The Basic Works of Aristotle*, ed. R. McKeon, (New York: Random House).
- Armstrong, D.M., (1978). *A Theory of Universals: Universals and Scientific Realism* Volume II. (Cambridge: Cambridge University Press).
- Audi, R., and Wainwright W. J., ed. (1986). *Rationality, Religious Belief, and Moral Commitment*, (Ithaca: Cornell University Press).
- Ayer, A.J., (1936). *Language, Truth and Logic*, (Harmondsworth: Pelican).
- Bealer, G., (1982). *Quality and Concept*, (Oxford: Clarendon Press).
- (1992). 'The Incoherence of Empiricism', *The Aristotelian Society*, Supp. Vol. 66, pp. 99-143.
- Benacerraf, P. and Putnam H., ed. (1964). *Philosophy of Mathematics: Selected Readings*, (Cambridge: Cambridge University Press).
- Black, M., ed. (1950). *Philosophical Analysis*, (Ithaca: Cornell University Press).
- Blackburn, S., ed. (1975). *Meaning, Reference and Necessity*, (Cambridge: Cambridge University Press).
- (1984a). *Spreading the Word*, (Oxford: Clarendon Press).
- (1984b). 'The Individual Strikes Back', *Synthese*, 58, pp. 281-301.
- (1993). *Essays in Quasi-Realism*, (Oxford: Clarendon Press).
- Blanshard, B., (1962). *Reason and Analysis*, (London: Allen & Unwin).
- Boghossian P. A., (1989). 'The Rule-Following Considerations', *Mind*, 98, pp. 507-549.
- (1990). 'The Status of Content', *The Philosophical Review*, 99, pp. 157-184.
- (1994). 'The Transparency of Mental Content', in Tomberlin (1994), pp. 33-50.
- Bonjour, L., (1985). *The Structure of Empirical Knowledge*, (Cam. Mass.: Harvard University Press).
- (1994). 'Against Naturalized Epistemology', *Midwest Studies in Philosophy*, 19, pp. 283-300.
- Butterfield, J., ed. (1986). *Language, Mind and Logic*, (Cambridge: Cambridge University Press).
- Campbell, C. A., (1958). 'Contradiction: 'Law' or 'Convention'?', *Analysis*, 18, pp. 73-76.
- Carnap, R., (1937). *The Logical Structure of Language*, tr., A. Smeaton, (London: Kegan Paul).

- \_\_\_\_\_(1956a). 'Empiricism, Semantics and Ontology', in Carnap (1956), pp. 295-221.
- \_\_\_\_\_(1956). *Meaning and Necessity*; (Chicago: the University of Chicago Press).
- Carrol, L., (1972). 'What the Tortoise Said to Achilles' in Copi and Gould (1972), pp. 117-119.
- Cassam, Q., (1986). 'Necessity and Externality', *Mind*, 95, pp. 446-464.
- Casullo, A., (1977). 'Kripke on the A Priori and the Necessary', *Analysis*, 37, reprinted in Moser (1987), pp. 161-169.
- Chandler, H., (1976). 'Plantinga and Contingently Possible', *Analysis*, 36, pp. 106-109.
- Chisholm, R., (1977). *Theory of Knowledge*, (New Jersey: Printice-Hall).
- Conee, E., (1991). 'The Possibility of Power Beyond Possibility' in Tomberlin, (1991), pp. 447-473.
- Conway, D. A., (1984). '"It Would Have Happened Already": On One Argument for a First Cause', *Analysis*, 44, pp. 159-166.
- Copi M. I. and Gould J. A., ed. (1972). *Readings on Logic*, (New York: Macmillian).
- Craig, E. J., (1975). 'The Problem of Necessary Truth' in Blackburn (1975), pp. 1-31.
- \_\_\_\_\_(1985). 'Arithmetic and Fact' in Hacking (1985), pp. 89-112.
- Craig, W. L., (1979). *The Kalam Cosmological Argument*, (London: Macmillian).
- \_\_\_\_\_(1985). 'Professor Mackie and the Kalam Cosmological Argument', *Religious Studies*, 20, pp. 367-375.
- \_\_\_\_\_(1991). 'Time and Infinity', *International Philosophical Quaterly*, 31, pp. 387-401.
- \_\_\_\_\_(1993). 'Reply to Smith: On the Finitude of the Past', *International Philosophical Quaterly*, 33, pp. 225-231.
- Craig, W. L., and Smith Q., (1993). *Theism, Atheism, and Big Bang Cosmology*, (Oxford: Clarendon Press).
- Curley, E. M., (1984). 'Descartes on the Creation of the Eternal Truths', *The Philosophical Review*, 93, pp. 569-597.
- Davidson, D., (1990). 'The Structure and Content of Truth', *Journal of Philosophy*, 87, pp. 279-328.
- Davison, S. A., (1991). 'Could Abstract Objects Depend upon God?', *Religious Studies* 27, pp. 485-497.
- Descartes, R., (1934). *The Philosophical Works of Descartes: Letters and Objections*, Vol. 2, tr. E. S. Haldane and G.R.T. Ross (Dover Publications)
- \_\_\_\_\_(1968). *The Principles of Philosophy* in *The Philosophical Writings of Descartes*, Vol. 1, tr. E.S. Haldane and G.R.T. Ross, (Cambridge: Cambridge University Press).
- \_\_\_\_\_(1970). *Philosophical Letters*, tr. and ed. by A. Kenny, (Oxford: Clarendon Press).
- Dummett, M., (1959a). 'Truth', in Dummett (1978), pp. 1-24.
- \_\_\_\_\_(1959b). 'Wittgenstein's Philosophy of Mathematics' in Dummett (1978), pp. 166-185.

- \_\_\_\_\_ (1973a). 'The Philosophical Basis of Intuitionistic Logic' in Dummett, (1978), pp. 215-247.
- \_\_\_\_\_ (1973b). 'The Justification of Deduction' in Dummett (1978), pp. 290-318.
- \_\_\_\_\_ (1978). *Truth and Other Enigmas*, (London: Duckworth).
- \_\_\_\_\_ (1991). *The Logical Basis of Metaphysics*, (London: Duckworth).
- Duncan-Jones, A.E., (1935). 'Is Strict Implication the Same as Entailment?', *Analysis*, 2, pp. 70-78.
- Edwards, P., ed. (1967). *The Encyclopedia of Philosophy*, (New York: Macmillan).
- Eells, E., (1988). 'Quenton Smith on Infinity and the Past', *Philosophy of Science*, 55, pp. 453-455.
- Field, H., (1989). *Realism, Mathematics and Modality*, (Oxford: Basil Blackwell).
- \_\_\_\_\_ (1993). 'The Conceptual Contingency of Mathematical Objects', *Mind*, 102, pp. 285-299.
- Fine, K., (1994). 'Essence and Modality', in Tomberlin (1994), pp. 1-16.
- Forbes, G., (1985). *The Metaphysics of Modality*, (Oxford: Clarendon Press).
- Frankfurt, H., (1977). 'Descartes on the Creation of Eternal Truths', *The Philosophical Review*, 86, pp. 36-57.
- Frege, G., (1950). *The Foundations of Arithmetic*, tr. J.L. Austin, (Oxford: Basil Blackwell).
- \_\_\_\_\_ (1952). 'On Sense and Reference', tr. M. Black, reprinted in Moore (1993), pp. 23-42.
- \_\_\_\_\_ (1956). 'The Thought: a Logical Inquiry', tr. Quinton and Quinton, *Mind*, 65, reprinted in Strawson, (1967), pp. 17-38.
- \_\_\_\_\_ (1964). *The Basic Laws of Arithmetic*, tr. M. Furth, (Berkeley: University of California Press).
- Geach, P., (1973). 'Omnipotence', *Philosophy*, 48, pp. 7-20.
- George, A., (1993). 'How Not to Refute Realism', *Journal of Philosophy*, Vol. 90, pp. 53-72.
- Gerson, L. P., (1990). *God and Greek Philosophy: Studies in the Early History of Natural Theology*, (London: Routledge).
- \_\_\_\_\_ (1994). *Plotinus*, (London: Routledge).
- Gewirth, A., (1970). 'The Cartesian Circle Reconsidered', *Journal of Philosophy*, 67, pp. 668-685.
- Grice H. P. and Strawson P. F., (1956). 'In Defence of a Dogma' *The Philosophical Review*, 65, pp. 141-158.
- Haack, S., (1978) *Philosophy of Logics*, (Cambridge: Cambridge University Press).
- Hacking, I., (1979). 'What is Logic?', *Journal of Philosophy*, pp. 285-319.
- \_\_\_\_\_ ed. (1985). *Exercises in Analysis*, (Cambridge: Cambridge University Press).
- Hahn H., (1980a). 'Empiricism, Mathematics, and Logic' in Hahn (1980), pp. 39-42.



- \_\_\_\_\_. (1980). *Empiricism, Logic, and Mathematics: Philosophical Papers*, ed. B. McGuinness, (Dordrecht: D. Reidel)
- Hale, B., (1987). *Abstract Objects*, (Oxford: Basil Blackwell).
- Hale, B., (1994). 'Is Platonism Epistemologically Bankrupt?', *The Philosophical Review*, 103, pp. 299-325.
- Hale, B., and Wright C., (1992). 'Nominalism and the Contingency of Abstract Objects', *Journal of Philosophy*, 89, pp. 111-135.
- \_\_\_\_\_. (1994). 'A Reductio Ad Surdum? Field on the Contingency of Mathematical Objects', *Mind*, 103, pp. 169-184.
- Hamlyn, D., W., (1967). 'Analytic and Synthetic Statements', in Edwards (1967), Vol. I, pp. 105-109.
- Harman, G., (1987). 'Logic and Reasoning' *Synthese*, 60, pp. 107-127.
- Helm, P., ed. (1981). *Divine Commands and Morality*, (Oxford: Oxford University Press).
- Hilbert, D., (1964), 'On the Infinite' in Benacerraf and Putnam, (1964), pp. 183-201.
- Hornsby, J. (1997). 'Truth: the Identity Theory', *The Aristotelian Society*, 71, pp. 1-24.
- Hughes, C., (1989). *On a Complex Theory of a Simple God*, (Ithaca: Cornell University Press).
- Hughes G. E. and Cresswell, M. J., (1968). *An Introduction to Modal Logic*, (London: Methuen).
- Hughes, G. J., (1995). *The Nature of God*, (London: Routledge).
- Hume, D., (1975). *Enquiries Concerning Human Understanding and the Principles of Morals*, ed. L. A. Selby Beggie, (Oxford: Clarendon Press).
- Ishiguro, H., (1986). 'The Status of Necessity and Impossibility in Descartes' in Rorty (1986), pp. 459-471.
- Johnson, L.E., (1992). *Focusing Truth*, (London: Routledge).
- Kant, I., (1885). *Introduction to Logic*, tr. by T.K. Abbott, (London: Longman's).
- \_\_\_\_\_. (1929). *Critique of Pure Reason*, tr. by N. K. Smith, (London: Macmillan).
- Katz, J.J., (1990). *The Metaphysics of Meaning* (Cam., Mass.: MIT press).
- \_\_\_\_\_. (1995). 'What Mathematical Knowledge Could Be', *Mind*, 105, pp. 491-522.
- Katz M. F. and Katz J.J., (1977). 'Is Necessity the Mother of Intension?' *The Philosophical Review*, 86, pp. 70-96.
- Kenny, A., (1970). 'The Cartesian Circle and the Eternal Truths', *Journal of Philosophy*, 67, pp. 685-700
- \_\_\_\_\_. (1979). *The God of the Philosophers*, (Oxford: Clarendon Press).
- Kessler, G., (1980). 'Frege, Mill, and The Foundations of Arithmetic', *Journal of Philosophy*, 77, pp. 65-79.
- Kitcher, P., (1980). 'Analyticity and Apriority', *Australasian Journal of Philosophy*, 58, reprinted in Moser (1987), pp. 190-207.

- Kirkham, R. L., (1992). *Theories of Truth: A Critical Introduction*, (Cam., Mass.: MIT Press).
- Kneale, W.C., (1945-46). 'Truths of Logic', *Proceedings of the Aristotelian Society*, 46, pp. 207-234.
- Konyndyk K., (1986). *Introductory Modal Logic*, (Indiana: Notre Dame University Press).
- Kretzmann, N., (1985). 'Ockham and the Creation of the Beginningless World', *Franciscan Studies*, 45, pp. 1-31.
- Kripke, S. A., (1980), *Naming and Necessity*, (Oxford: Blackwell).
- \_\_\_\_\_(1982), *Wittgenstein on Rules and Private Language*, (Oxford: Blackwell).
- La Croix, R., (1984). 'Descartes on God's Ability to Do the Logically Impossible', *Canadian Journal of Philosophy*, vol. XIV, pp. 455-475.
- Leibniz, G. W., (1896). *New Essays Concerning Human Understanding*, tr. A. G. Langley, (New York: Macmillan).
- \_\_\_\_\_(1973a). *Monadology* in Leibniz (1973).
- \_\_\_\_\_(1973). *Philosophical Writings*, tr.by M. Morris and G. H. R. Parkinson; ed. by G. H. R. Parkinson, (London: Everyman's Library).
- \_\_\_\_\_(1989). *Philosophical Essays*, tr. R. Ariew and D. Garber, (Indianapolis: Hackett Publ. Co.).
- Leftow, B., (1990a). 'Is God an Abstract Object?', *Nous*, 24, pp. 581-598.
- \_\_\_\_\_(1990b). 'God and Abstract Objects', *Faith and Philosophy*, 7, pp. 193-217.
- Lewis, C. I., (1918). *A Survey of Symbolic Logic*, (Berkeley: University of California Press).
- Lewis, D., (1973). *Countefactuals*, (Oxford: Blackwell).
- \_\_\_\_\_(1979). 'Attitudes *De Dicto* and *De Se*', in D. Lewis (1983), pp. 132-159.
- \_\_\_\_\_(1983). *Philosophical Papers*, Vol. I. (New York: Oxford University Press).
- \_\_\_\_\_(1986). *On the Plurality of Worlds*, (Oxford: Blackwell).
- Lewy, C., (1976). *Meaning and Modality*, (Cambridge: Cambridge University Press).
- \_\_\_\_\_(1950), 'Entailment and Necessary Propositions', in Black (1950).
- Loux, M. J., ed. (1979). *The Possible and the Actual: Readings in the Metaphysics of Modality*, (Ithaca: Cornell University Press).
- \_\_\_\_\_(1986). 'Toward an Aristotelian Theory of Abstract Objects', *Midwest Studies in Philosophy*, XI, pp. 495-512.
- Mackie, J.L., (1982). *The Miracle of Theism*, (Oxford: Clarendon Press).
- Mann, W.L., (1982). 'Divine Simplicity' *Religious Studies*, 18, pp. 451-471.
- McDowell, J., (1989). 'Mathematical Platonism and Dummettian Anti-Realism', *Dialectica*, 43, pp. 173-192.
- McFetridge I., (1990a). 'Logical Necessity: Some Issues', in McFetridge (1990), pp. 135-154.
- \_\_\_\_\_(1990b). 'Descartes on Modality', in McFetridge (1990), pp. 155-212.

- \_\_\_\_\_(1990). *Logical Necessity and Other Essays*, ed. J. Haldane and R., Scruton, (London: Aristotelian Society).
- Menzel, C., (1987). 'Theism, Platonism and the Metaphysics of Mathematics', *Faith and Philosophy*, 4, pp. 365-382.
- Mill, J.S., (1967). *A System of Logics*, (London: Longman's).
- Miller B., (1994). "On 'Divine Simplicity: A New Defense'", *Faith and Philosophy*, 11, pp. 474-477.
- Moore, A.W., ed. (1993). *Meaning and Reference*, (Oxford: Oxford University Press).
- Morris, T.V., (1985). 'On God and Mann: A View of Divine Simplicity', *Religious Studies*, 21, pp. 299-318.
- \_\_\_\_\_(1986). *The Logic of God Incarnate*, (Ithaca: Cornell University Press)
- \_\_\_\_ed. (1987). *The Concept of God*, (Oxford: Oxford University Press)
- \_\_\_\_ed. (1988). *Divine and Human Action: Essays in the Metaphysics of Theism*, (Ithaca: Cornell University Press).
- Morris, T. V., Menzel, C., (1986). 'Absolute Creation', *American Philosophical Quarterly*, 23, pp. 353-362.
- Moser, P., ed. (1987). *A Priori Knowledge*, (Oxford: Oxford University Press).
- Nell, E. J., (1961). 'The Hardness of Logical "Must" ', *Analysis*, 21, pp. 68-72.
- Oliver, A., (1996). 'The Metaphysics of Properties', *Mind*, 105, pp. 1-80.
- O'Meara, D.J., (1995). *Plotinus: An Introduction to Enneads*, (Oxford: Clarendon Press).
- Pap, A., (1949). 'Are all Necessary Propositions Analytic?', *The Philosophical Review*, 1949, pp. 299-320.
- \_\_\_\_\_(1958). *Semantics and Necessary Truths*, (New Haven: Yale University Press).
- Papineau, D., (1993). *Philosophical Naturalism*, (Oxford: Basil Blackwell).
- Peacocke, C., (1976). 'What is a Logical Constant?', *Journal of Philosophy*, 73, pp. 221-240.
- \_\_\_\_\_(1997). 'Metaphysical Necessity: Understanding, Truth and Epistemology', *Mind*, 106, pp. 521-574.
- Peikoff, L., (1984). 'Platonism's Inference from Logic to God', *International Philosophical Studies*, pp. 25-33.
- Peterson, J. (1995). 'God as Truth', *Faith and Philosophy*, 12, 342-360.
- Plantinga, A., (1974). *The Nature of Necessity*, (Oxford: Clarendon Press).
- \_\_\_\_\_(1976). 'Actualism and Possible Worlds', *Theoria*, 42, reprinted in Loux, (1979), pp. 253-273.
- \_\_\_\_\_(1980), *Does God Have a Nature?*, (Milwaukee: Marquette University Press)
- \_\_\_\_\_(1982). 'How to be an Anti-Realist?', *Proceedings of the American Philosophical Association*, 56, pp. 47-70.
- \_\_\_\_\_(1987). 'Two Concepts of Modality: Modal Realism and Modal Reductionism' in Tomberlin (1987), pp. 189-231.
- \_\_\_\_\_(1993). *Warrant and Proper Function*, (New York: Oxford University Press).



- Plotinus (1966-88). *Enneads*, tr. A. H. Armstrong, Loeb Classical Library, (Cambridge, Mass.: Harvard University Press).
- Pollock, J.L., (1967). 'The Logic of Logical Necessity', *Logique et Analyse*, 10, pp. 307-323.
- \_\_\_\_\_(1984). *The Foundations of Philosophical Semantics*, (Princeton: Princeton University Press).
- Prior, A. N., (1960). 'The Roundabout Inference-Ticket', *Analysis*, 21, reprinted in Copi and Gould (1972), pp. 217-218.
- Putnam H., (1971). *Philosophy of Logic*, (London: George Allen & Unwin).
- \_\_\_\_\_(1983a). 'There is at Least One A Priori Truth' in Putnam (1983), pp. 98-114.
- \_\_\_\_\_(1983b). 'Analyticity and Necessity: Beyond Wittgenstein and Quine' in Putnam (1983), pp. 115-138.
- \_\_\_\_\_(1983c). 'Convention: a Theme in Philosophy' in Putnam (1983), pp. 170-183.
- \_\_\_\_\_(1983). *Realism and Reason: Philosophical papers*, vol. 3, (Cambridge: Cambridge University Press)
- Quine, W. V., (1935). 'Truth by Convention' reprinted in Quine (1966), pp. 77-106.
- \_\_\_\_\_(1953a). 'On What There is' in Quine (1953), pp. 1-19.
- \_\_\_\_\_(1953b). 'Two Dogmas of Empiricism' in Quine (1953), pp. 20-46.
- \_\_\_\_\_(1953). *From a Logical Point of View*, (Cam., Mass.: Harvard University Press)
- \_\_\_\_\_(1960). *Word and Object*, (Cam., Mass.: MIT Press).
- \_\_\_\_\_(1963). 'Necessary Truth' in Quine (1966), pp. 68-76.
- \_\_\_\_\_(1966). *The Ways of Paradox and Other Essays*, (Cam., Mass.: Harvard University Press).
- Quinn, P., (1982). 'Metaphysical Necessity and Modal Logics', *The Monist*, 65, pp. 444-455.
- Quinton, A., (1973). *The Nature of Things*, (London: Routledge & Kegan Paul).
- Rasmussen, S. A., and Ravnkilde, (1982). 'Realism and Logic', *Synthese*, 52, pp. 379-437.
- Rescher, N., (1973). 'The Ontology of Possible' reprinted in Loux (1979), pp. 166-189.
- Rorty, A. O., ed. (1986). *Essays on Descartes' Meditations*, (Berkeley: California University Press).
- Ross, J.F., (1980). 'Creation', *Journal Of Philosophy*, 77, pp. 614-629.
- \_\_\_\_\_(1986). 'God, Creator of Kinds and Possibilities' in Audi and Wainwright, (1986).
- Russell, B., (1937). *A Critical Exposition of Leibniz's Philosophy*, (London: George Allen & Unwin).
- \_\_\_\_\_(1964). 'Selections from *Introduction to Mathematical Philosophy*' in Benacerraf and Putnam (1964), pp. 160-182.
- \_\_\_\_\_(1967). *The Problems of Philosophy*, (Oxford: Oxford University Press).
- Salmon, N., (1982). *Reference and Essence*, (Princeton: Princeton University Press).
- \_\_\_\_\_(1984). 'Impossible Worlds', *Analysis*, 44, pp. 114-117.

- \_\_\_\_\_ (1989). 'The Logic of What Might Have Been', *The Philosophical Review*, XCVIII, pp. 3-34.
- Schmaltz, T. M., (1991). 'Platonism and Descartes' view of Immutable Essences', *Archiv fur Geschichte der Philosophie* (1991), pp. 129-170.
- Skorupski, J., (1989). *John Stuart Mill*, (London: Routledge).
- Smith, Q., (1987). 'Infinity and the Past', *Philosophy of Science*, 54, reprinted in Craig and Smith (1993), pp. 77-81.
- \_\_\_\_\_ (1993). 'Reply to Craig: The Possible Infinitude of the Past', *International Philosophical Quarterly*, 33, pp. 109-115.
- Sober, E., (1993). 'Mathematics and Indispensability', *The Philosophical Review*, 102, pp. 35-57.
- Sorabji, R., (1983). *Time, Creation and Continuum*, (London: Duckworth).
- Strawson P. F. , (1948). 'Necessary Propositions and Entailment-Statements', *Mind*, 57, pp. 184-200.
- \_\_\_\_\_ (1952). *Introduction to Logical Theory*, (London: Methuen).
- \_\_\_\_\_ (1967a) 'Introduction' to Strawson (1967), pp. 1-16.
- \_\_\_\_\_ ed. (1967). *Philosophical Logic*, (Oxford: Oxford University Press).
- Stroud, B., (1965). 'Wittgenstein and Logical Necessity', *The Philosophical Review*, 74, reprinted in Moser (1987), pp. 68-84.
- \_\_\_\_\_ (1981). 'Evolution and the Necessities of Thought' in Sumner, Slater, Wilson (1981), pp. 236- 247.
- Stump E., ed. (1993). *Reasoned Faith*, (Ithaca: Cornell University Press).
- Stump, E. and Kretzmann, N., (1985). 'Absolute Simplicity', *Faith and Philosophy*, 2, pp. 358-382.
- Sumner, L. W.; et al, ed. (1981). *Pragmatism and Purpose: Essays Presented to Thomas A. Goudge*, (Toronto: University of Toronto Press).
- Swinburne, R., (1974) 'Duty and the Will of God', *Canadian Journal of Philosophy*, reprinted in Helm, (1981), pp. 120-134.
- \_\_\_\_\_ (1975). 'Analyticity, Necessity and Apriority' *Mind*, 84, reprinted in Moser (1987), pp. 179-189.
- \_\_\_\_\_ (1977). *The Coherence of Theism*, (Oxford: Clarendon Press).
- \_\_\_\_\_ (1993). 'God and Time' in Stump (1993), pp. 204-222.
- Thomson, J. F., (1963). 'What Achilles Should Have Said to the Tortoise', *Ratio*, (1963), pp. 95-105.
- Tomberlin, J. E., ed. (1987). *Philosophical Perspectives, I: Metaphysics* (California: Ridgeview).
- \_\_\_\_\_ ed. (1991). *Philosophical Perspectives, V: Philosophy of Religion* (California: Ridgeview).

- \_\_\_\_\_ed. (1994). *Philosophical Perspectives, VIII: Logic and Language*, (California: Redgeview).
- Van Cleve, J., (1994). 'Descartes and the Destruction of the Eternal Truths', *Ratio (New Series)*, 7, pp. 58-62.
- Vanicella, W.F. (1992). 'Divine Simplicity: A New Defense', *Faith and Philosophy*, 9, pp. 508-525.
- \_\_\_\_\_ (1994). 'On Property Self-Exemplification: Rejoinder to Miller', *Faith and Philosophy*, 11, pp. 478-481.
- Wainwright, W. J., (1982). 'Critical Notice of *The Kalam Cosmological Argument*', *Nous*, 16, 328-334.
- Wells, N. J., (1982). 'Descartes's Uncreated Eternal Truths', *New Scholasticism*, 56, pp.185-199.
- Williamson, T., (1994). *Vagueness*, (London: Routledge)
- Wittgenstein, L., (1922). *Tractatus Logico-Philosophicus*, tr. D.F. Pears and B.F. McGuiness, (London: Routledge & Kegan Paul)
- \_\_\_\_\_ (1953). *Philosophical Investigations*, tr, G. E. M. Anscombe, (Oxford: Blackwell)
- \_\_\_\_\_ (1956). *Remarks on the Foundations of Mathematics*, ed. G. H. von Wright, R. Rhees, G. E. M., Anscombe, tr. G. E. M., Anscombe, (Oxford: Blackwell)
- \_\_\_\_\_ (1967). *Zettel*, ed. G. E. M., Anscombe, G. H., von Wright; tr. G.E.M., Anscombe (Oxford: Blackwell)
- Wilson M., (1978). *Descartes*, (London: Routledge & Kegan Paul).
- Wolterstorff, N., (1970). *On Universals*, (Chicago: the University of Chicago Press).
- \_\_\_\_\_ (1991). 'Divine Simplicity' in Tomberlin, (1991), pp. 531-552.
- Wright, C., (1980). *Wittgenstein on the Foundations of Mathematics*, (London: Duckworth).
- \_\_\_\_\_ (1983). *Frege's Conception of Numbers as Objects*, (Aberdeen: Aberdeen University Press).
- \_\_\_\_\_ (1985). 'In defence of the Conventional Wisdom', in Hacking (1985), pp. 171-197.
- \_\_\_\_\_ (1986). 'Inventing Logical Necessity' in Butterfield (1986), pp. 187-209.
- \_\_\_\_\_ (1987). 'Realism, Anti-Realism, Irrealism, Quasi-Realism', *Midwest Studies in Philosophy*, 12, pp. 25-49.
- \_\_\_\_\_ (1989). 'Miscontruals Made Manifest: A Response to Simon Blackburn', *Midwest Studies in Philosophy*, 14, pp. 48-67.
- \_\_\_\_\_ (1992). *Truth and Objectivity*, (Cam., Mass.: Harvard University Press).
- Zagzebski, L., (1989). 'Individual Essence and the Creation' in Morris, (1988), pp. 119-144.